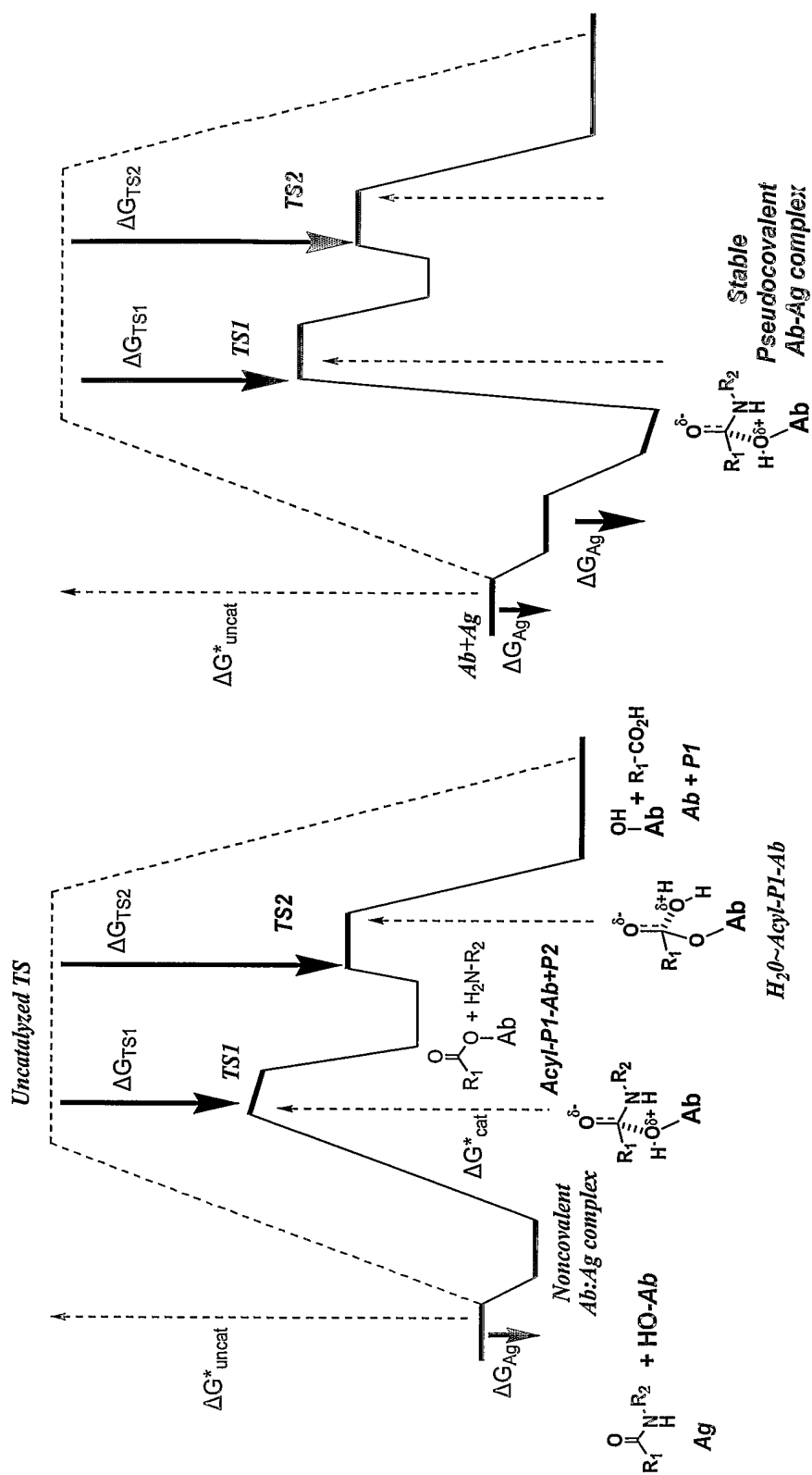
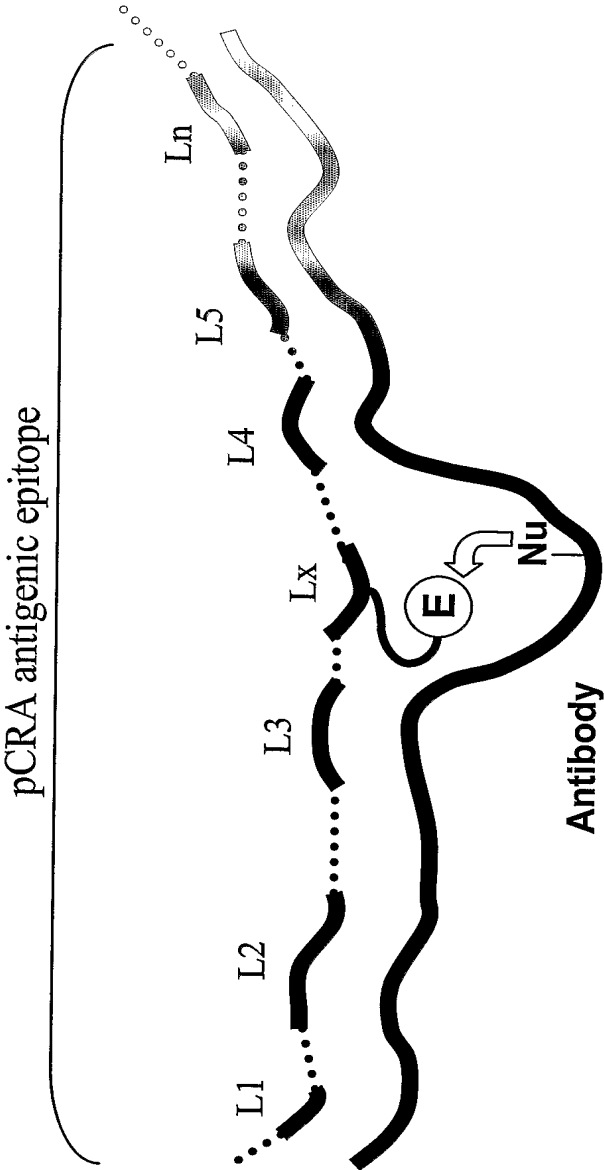


# Catalysis and covalent binding energies of antibodies



**Fig 1**

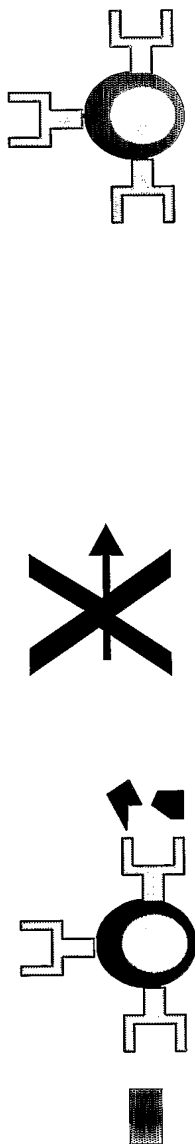
Fig 2



# Induction of catalyst synthesis

Ordinary polypeptide antigen,  
Slow transmembrane signal

Aborted clonal selection,  
tolerance



Covalent stimulation,  
Rapid transmembrane signal

Increased turnover, proliferation

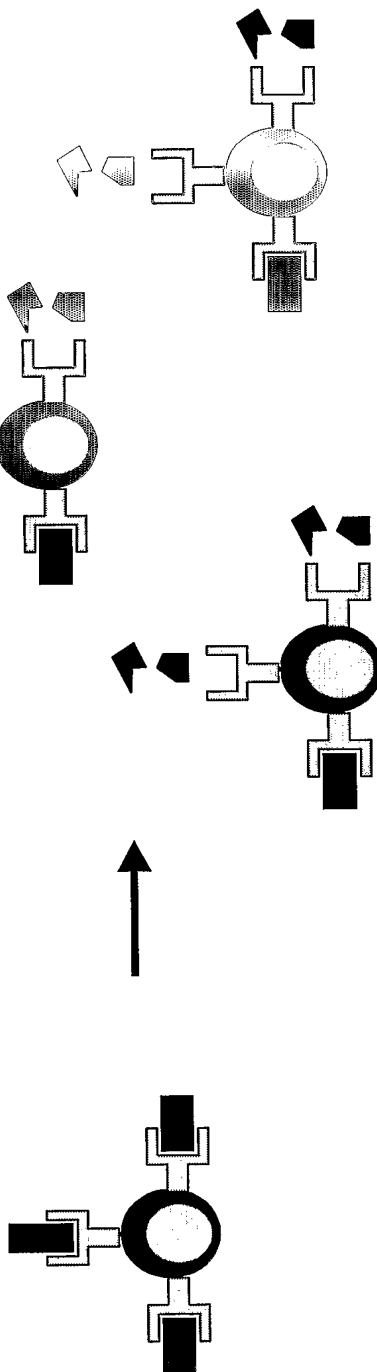
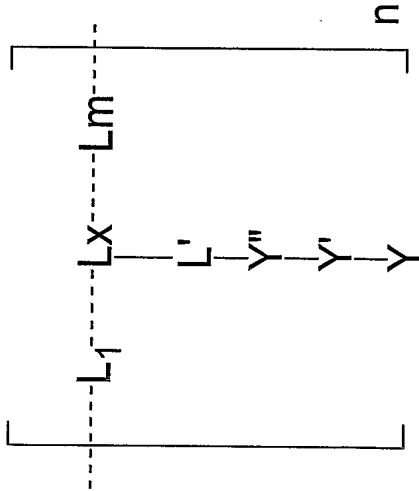


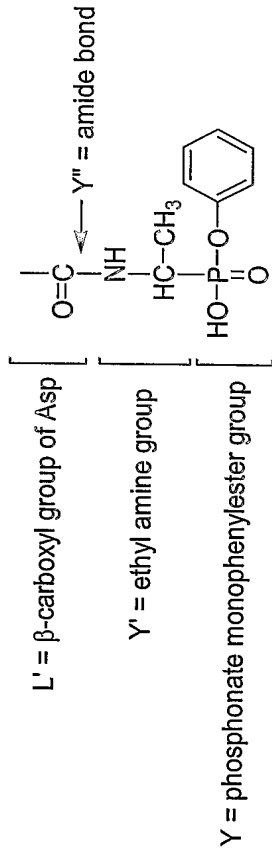
Fig 3

Fig 4

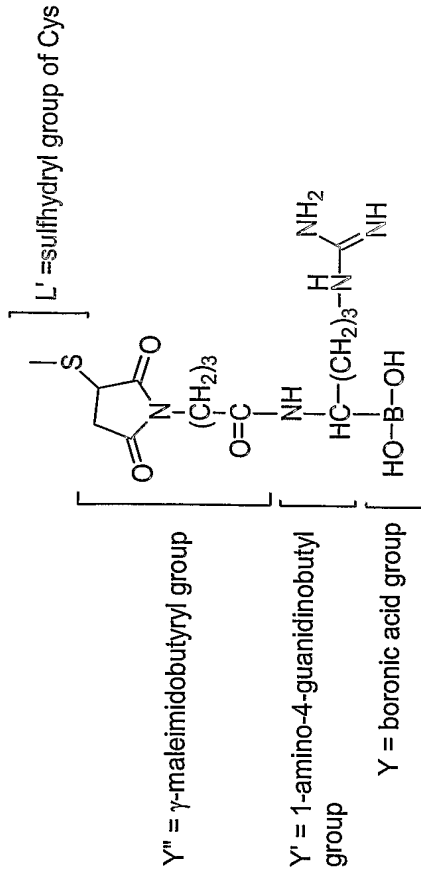
General structure of pCRA



• L'-Y''-Y'-Y, Example 1



• L'-Y''-Y'-Y, Example 3



• L'-Y''-Y'-Y, Example 2

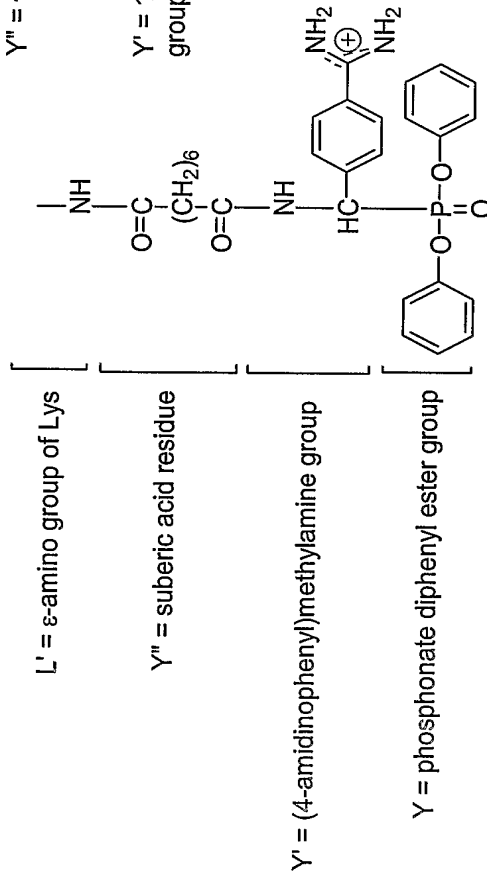


Fig 5A

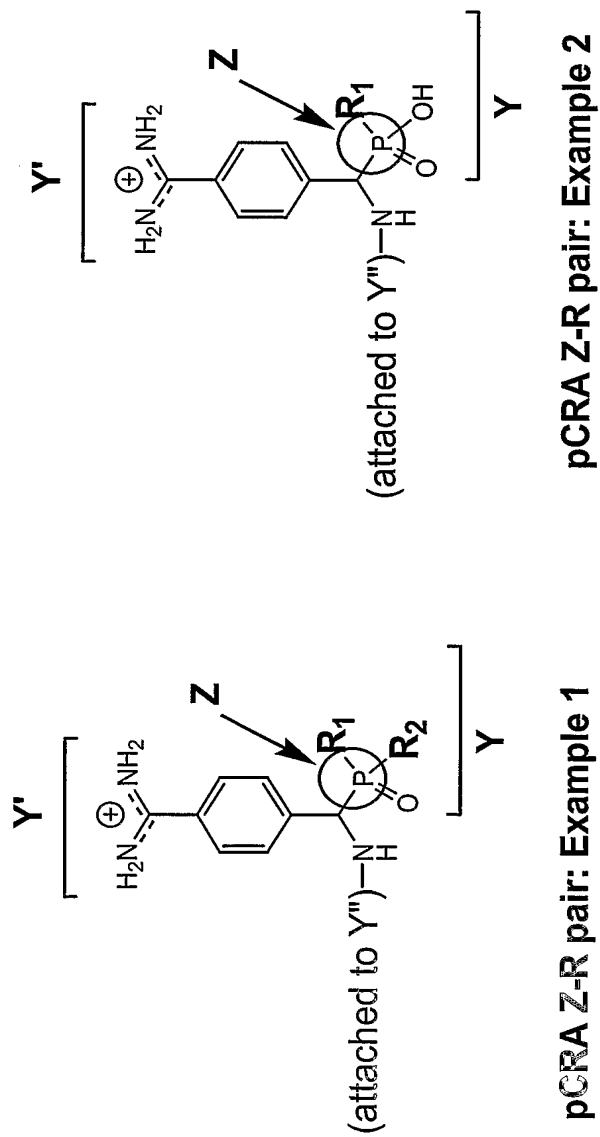


Fig 5B

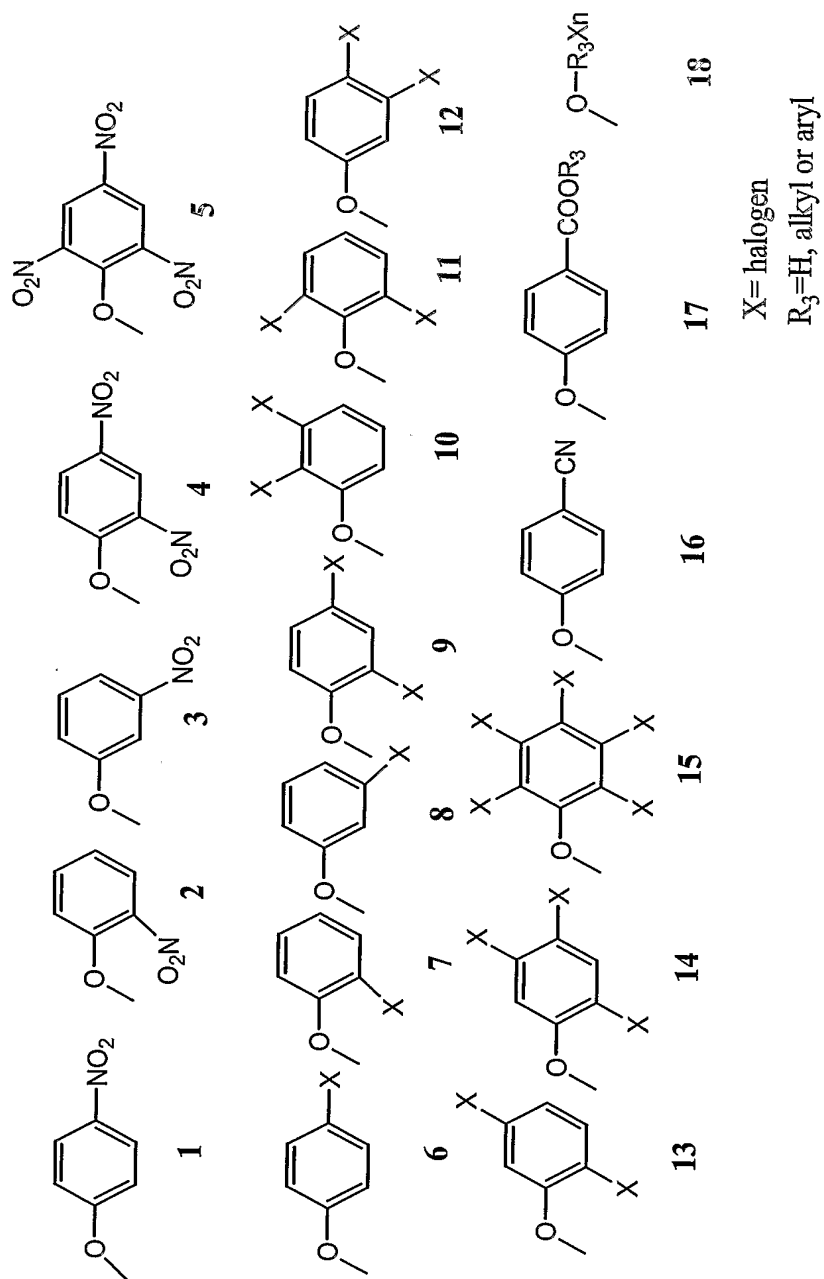
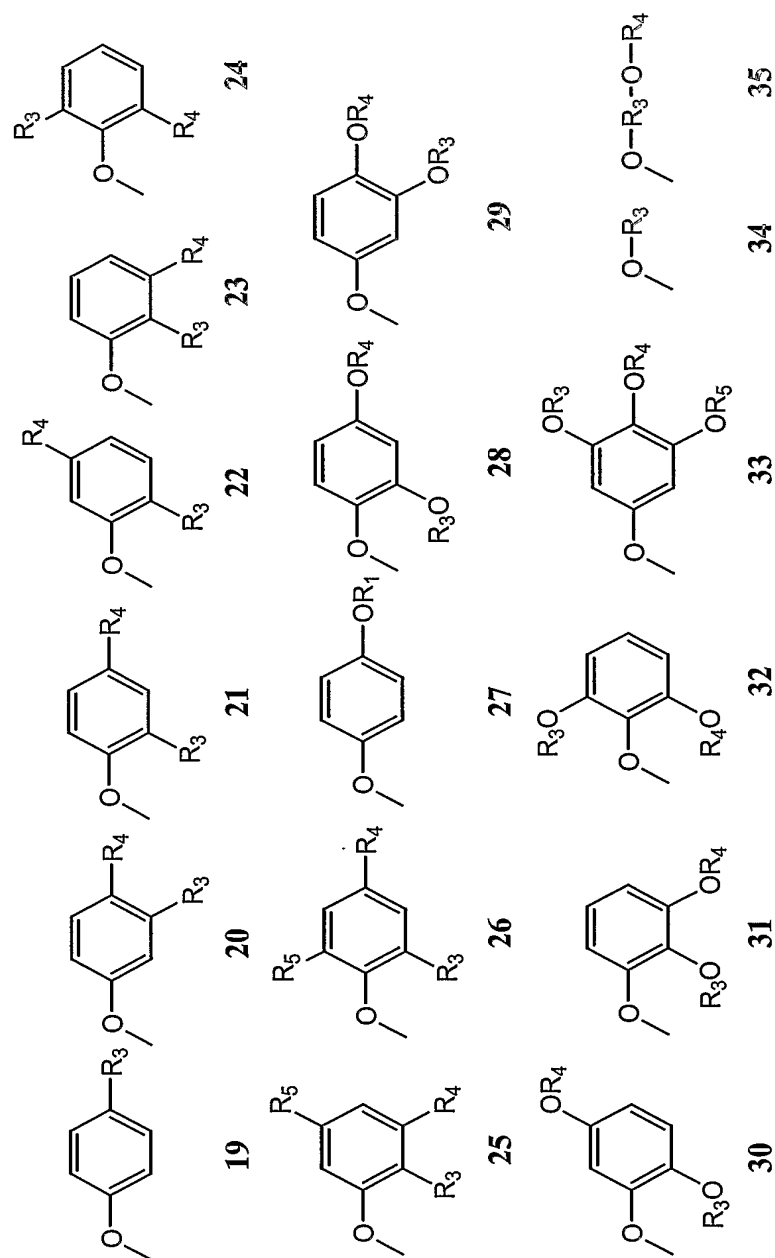


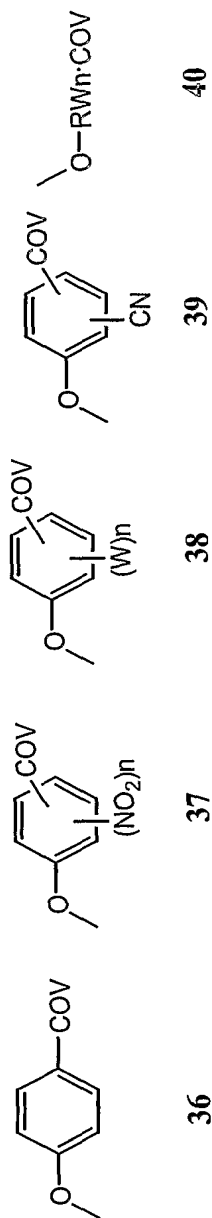
Fig 5C



$\text{R}_n = \text{H, alkyl or aryl}$

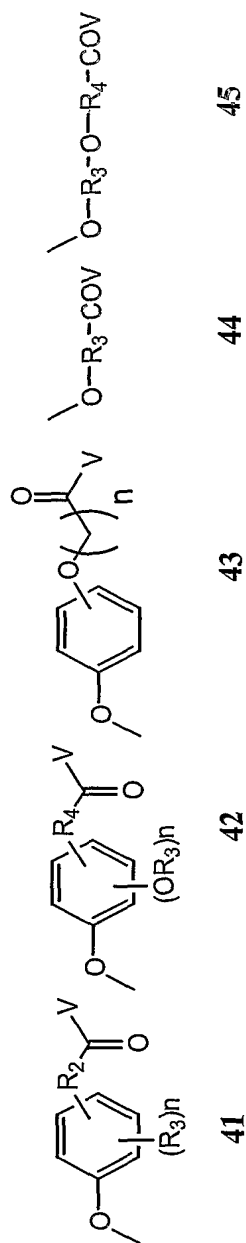
Fig 5D

## A. Electron withdrawing substituents with peptide extension



W: halogen  
V: peptide  
R: alkyl or aryl

## B. Electron donating substituents with peptide extension



V: peptide  
Rn: alkyl or aryl





A

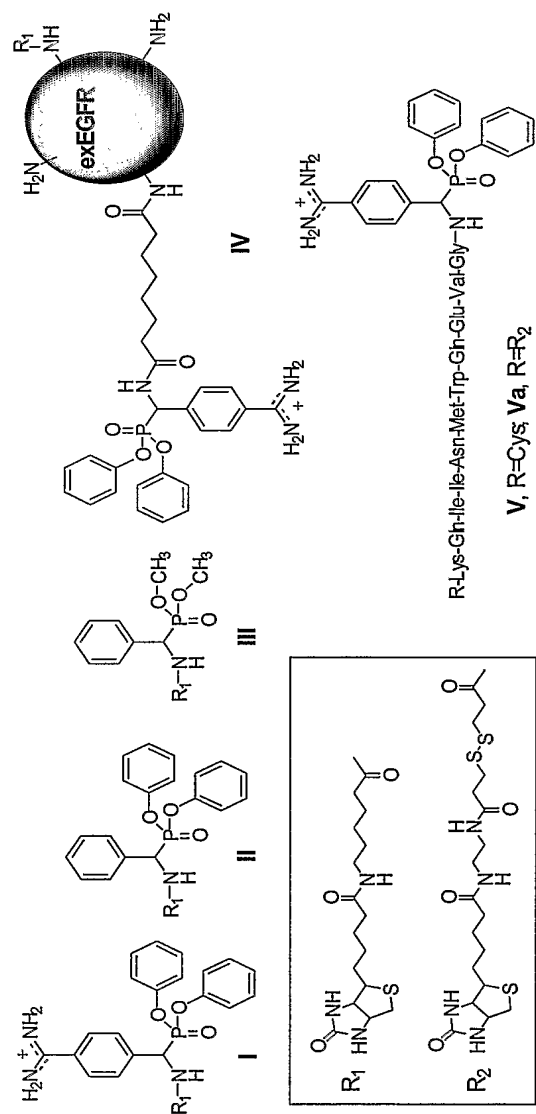


Fig. 8

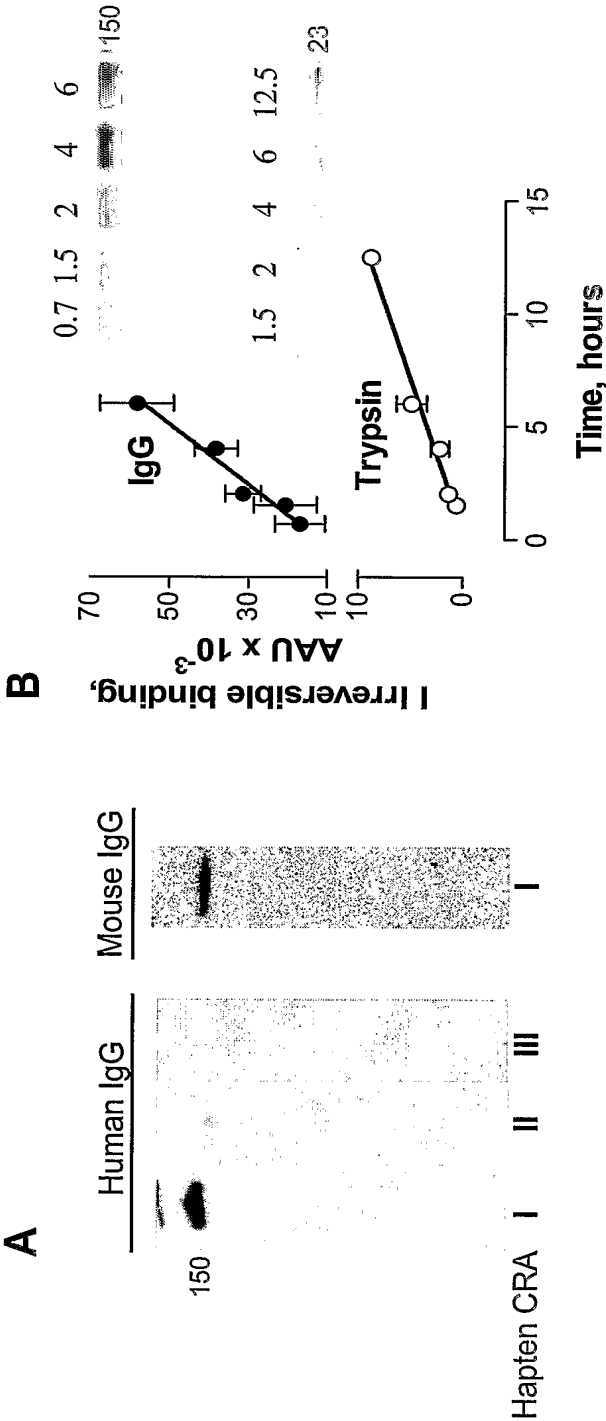


Fig. 9

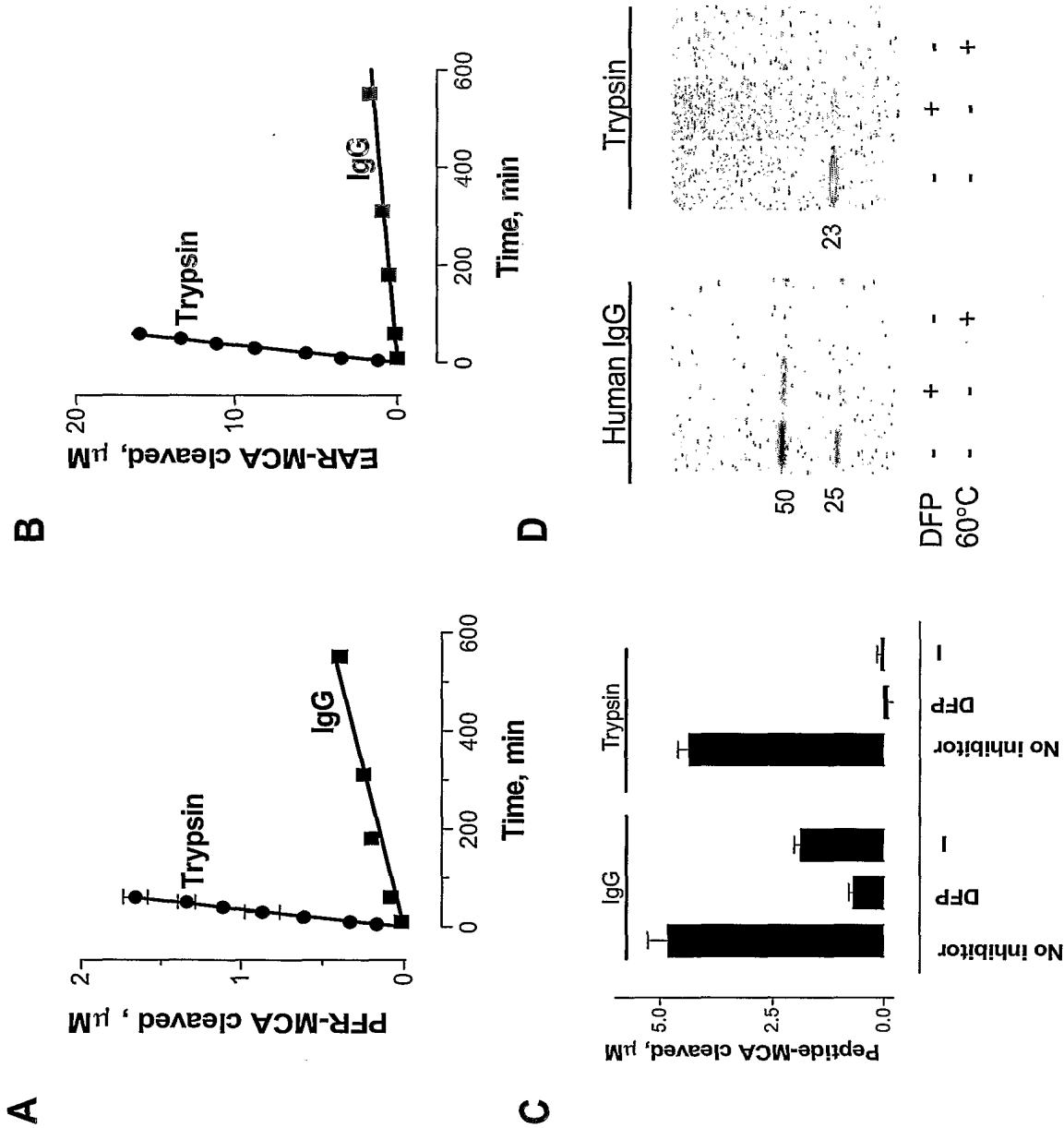


Fig. 10

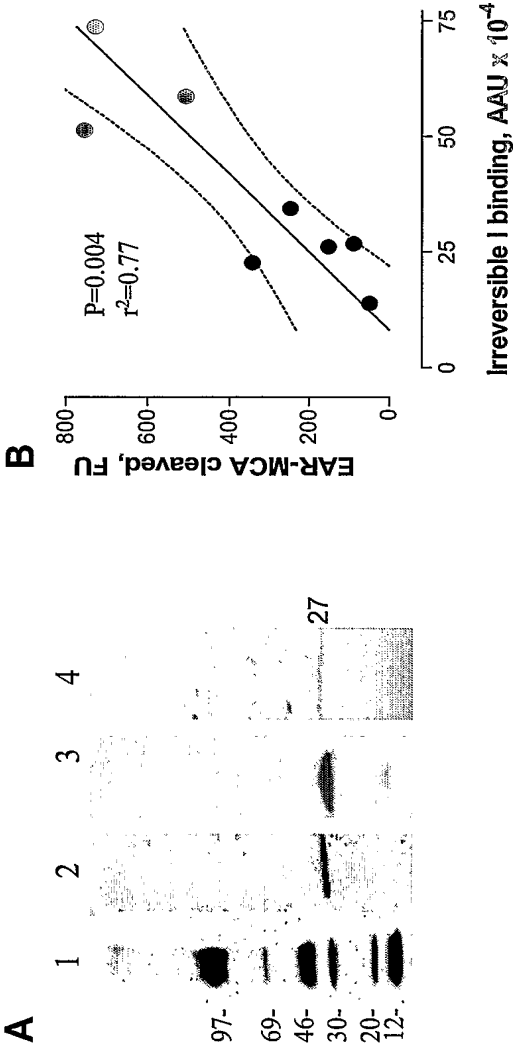


Fig 11

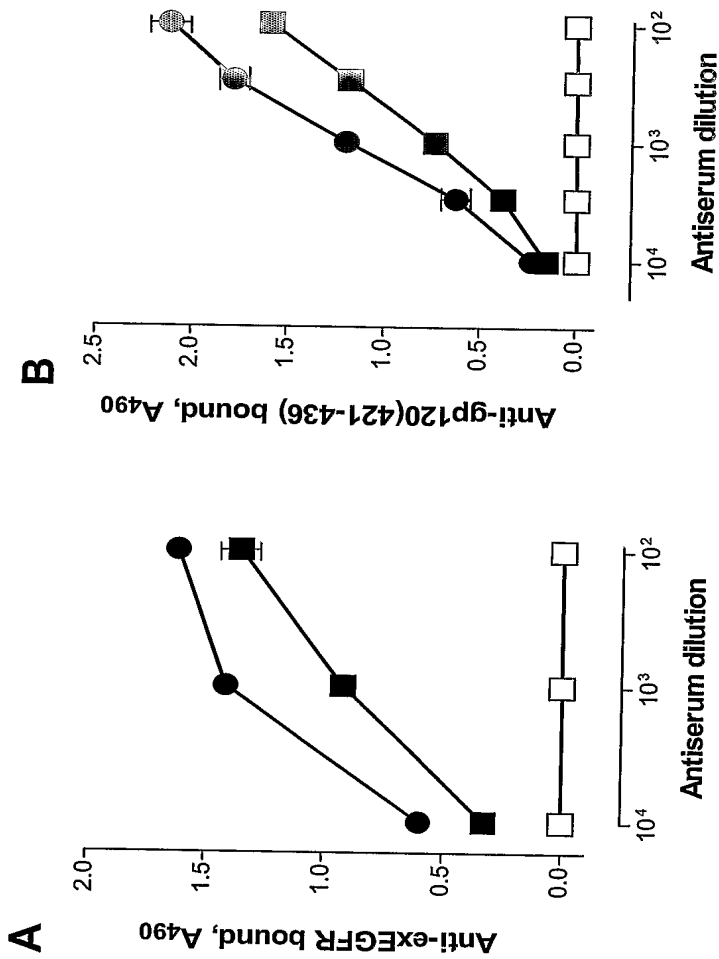


Fig 12

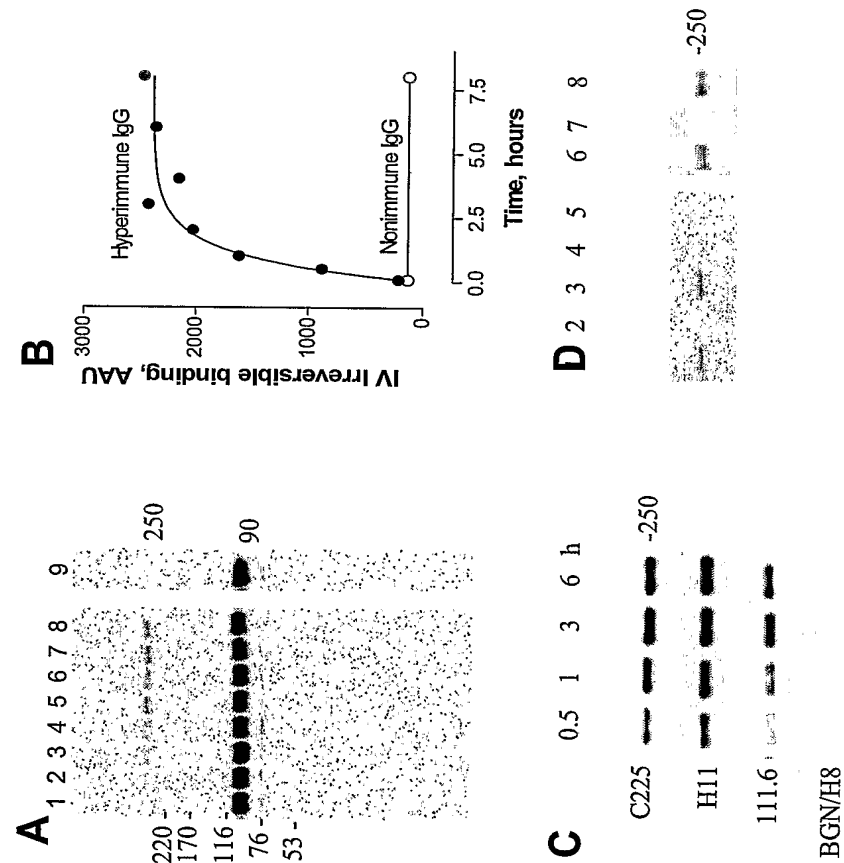
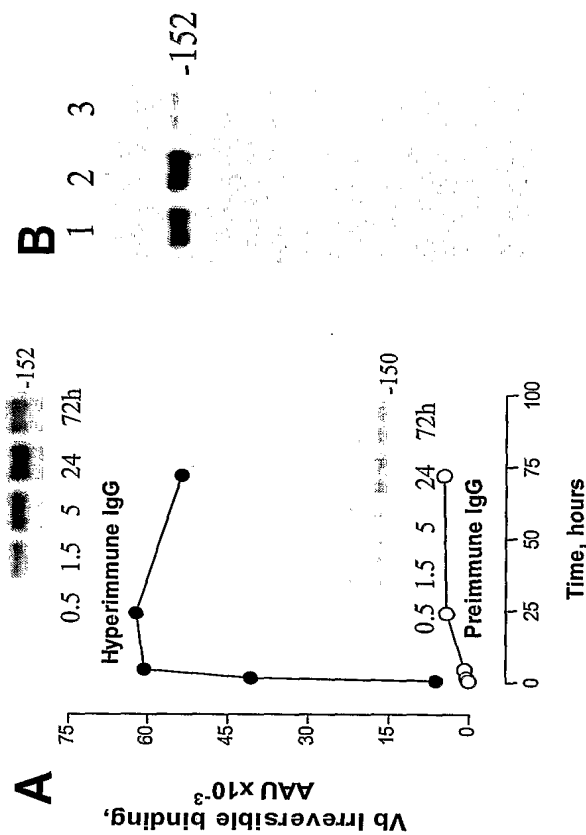


Fig 13





91

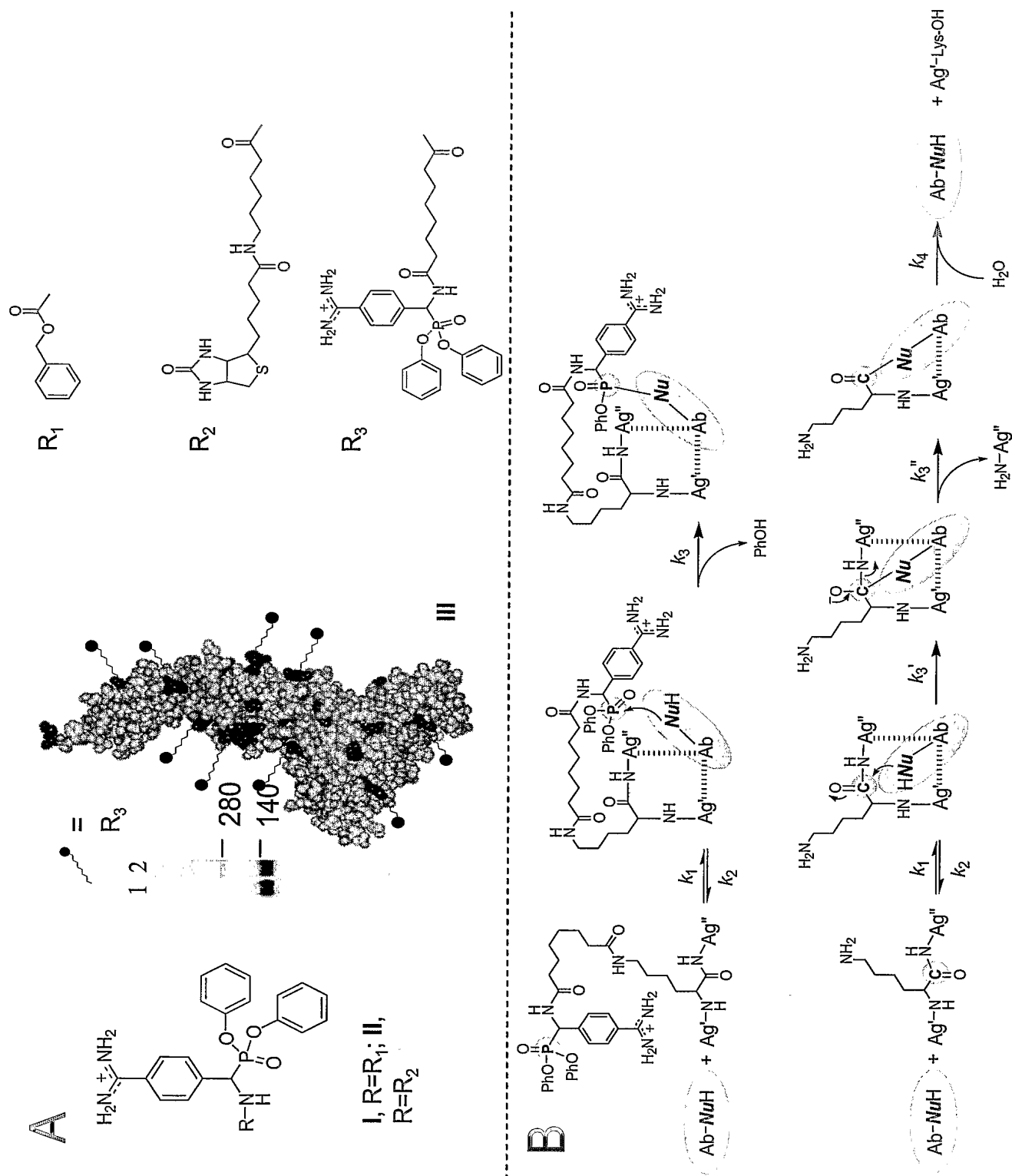


Fig 15

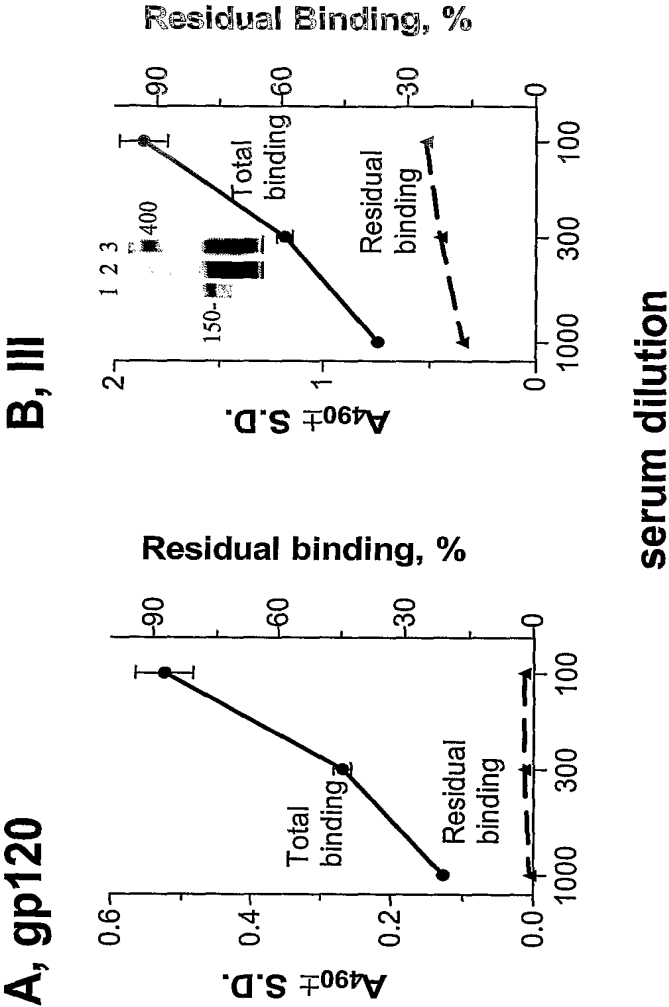
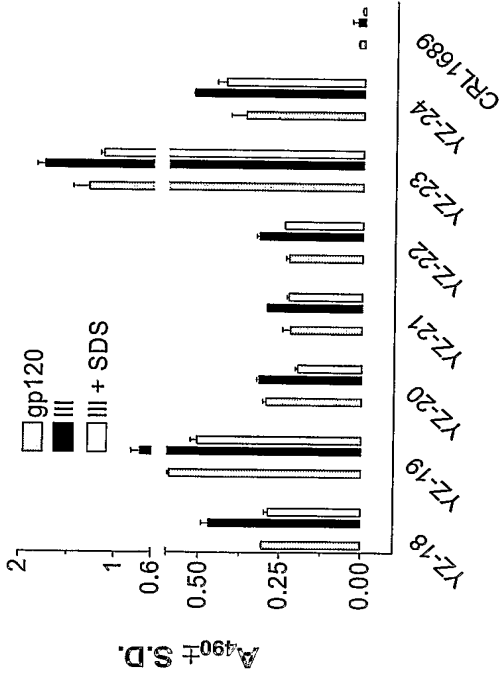


Fig 16

A



B

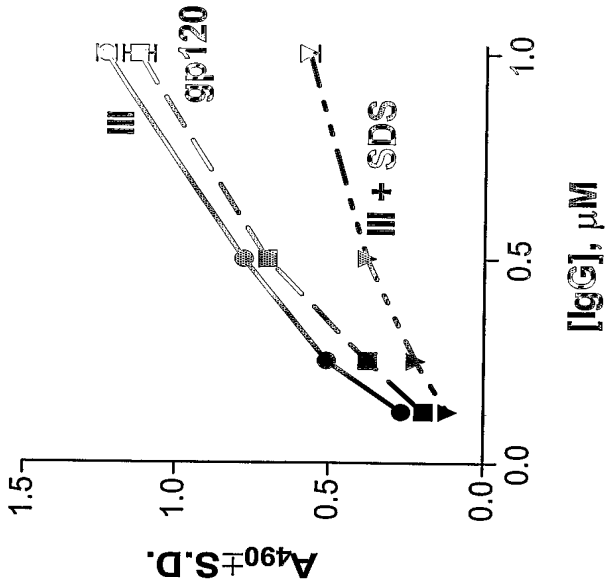


Fig 17

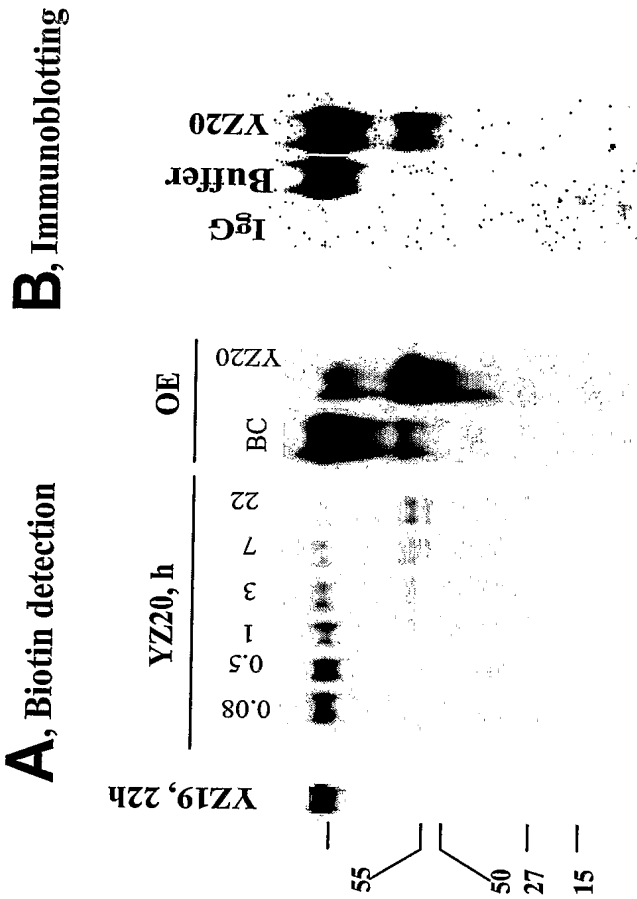


Fig 18

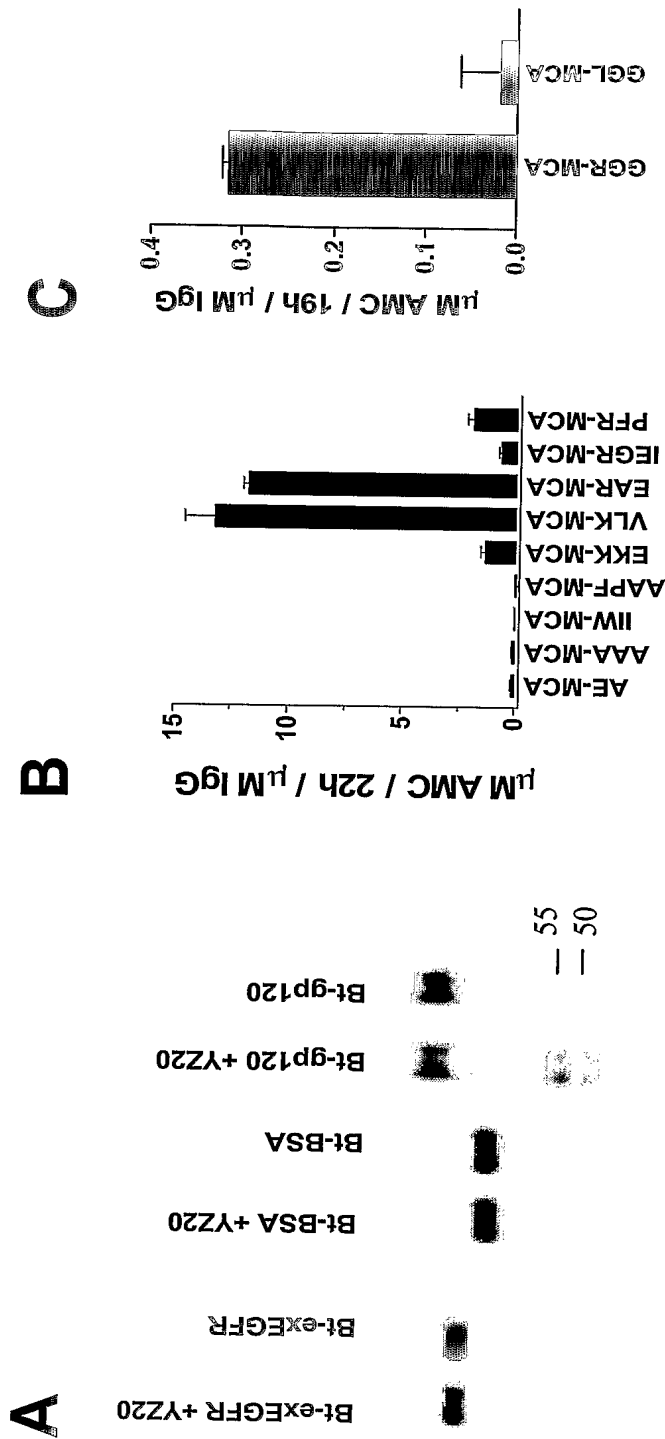
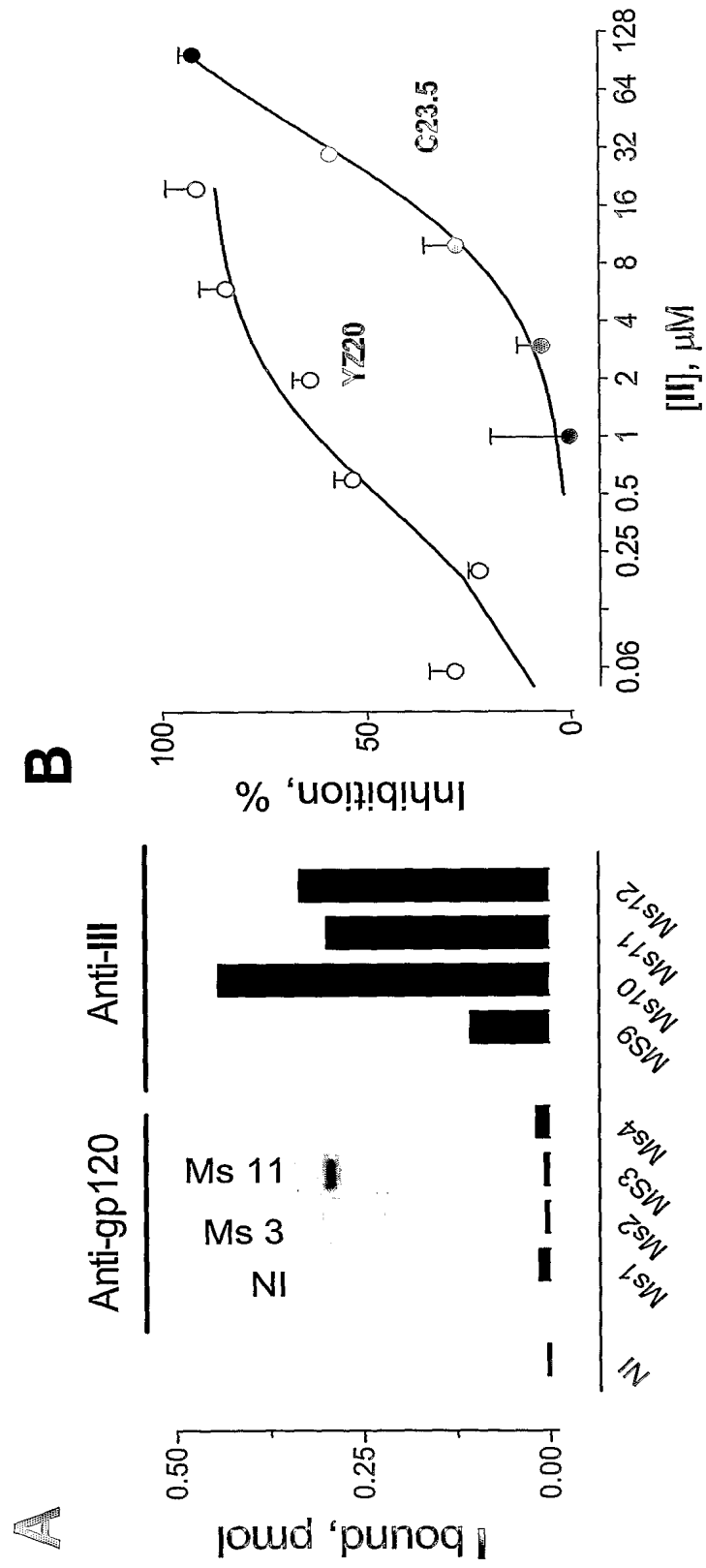


Fig 19



2019

A

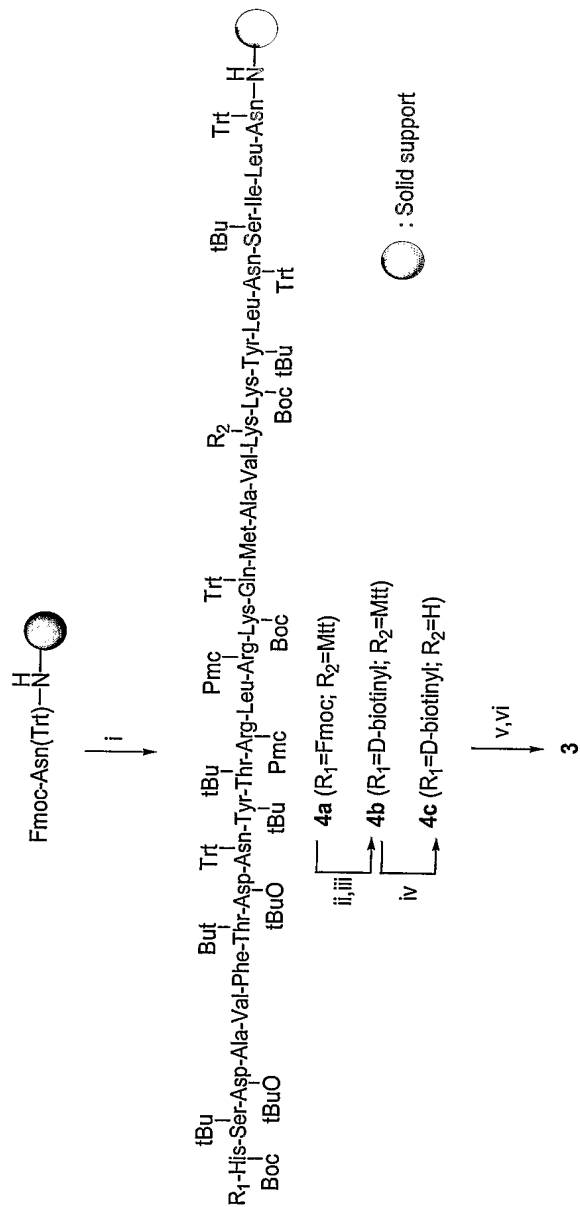
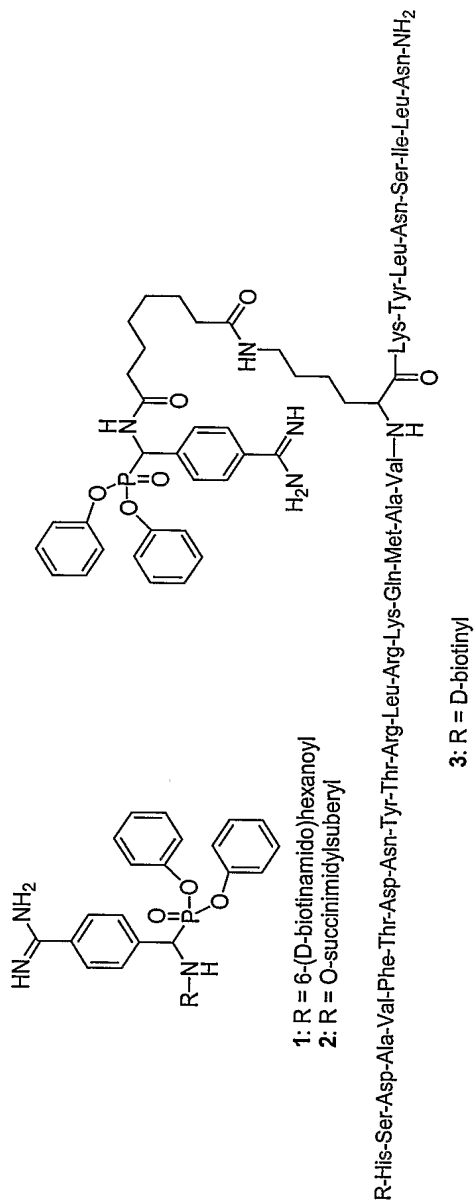


Fig 21

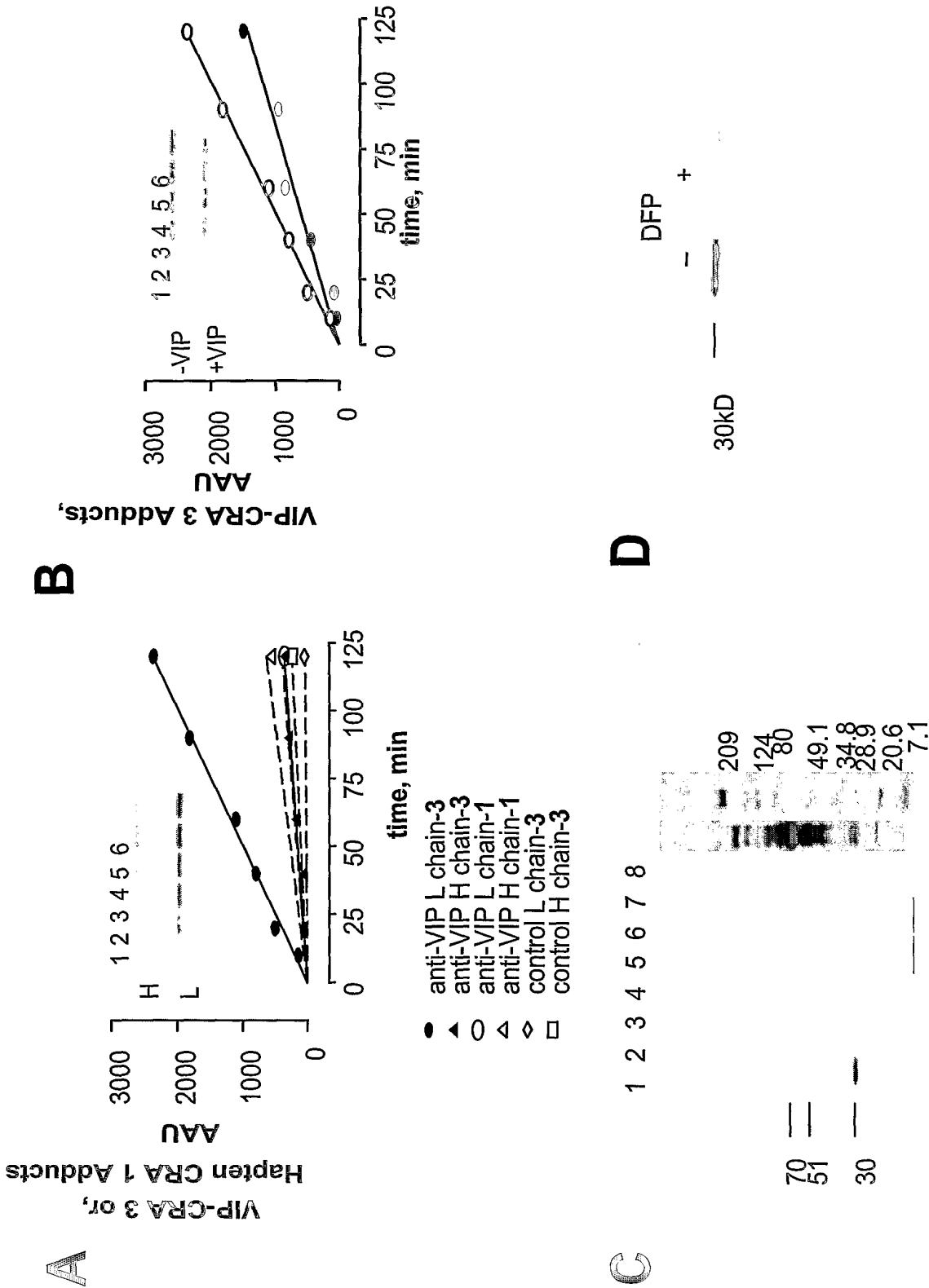
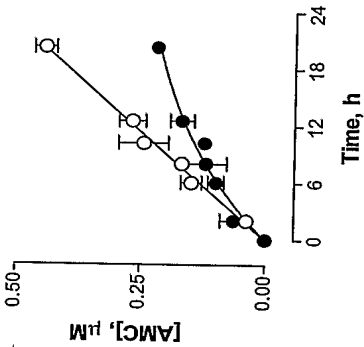


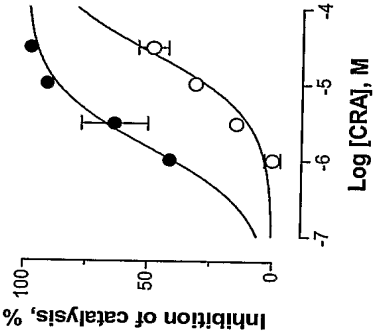


Fig 22

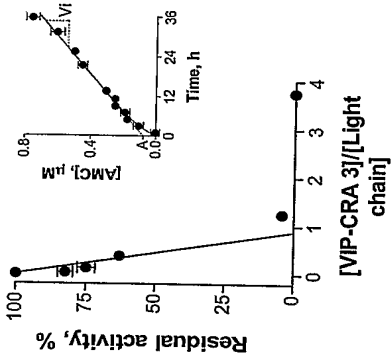
A



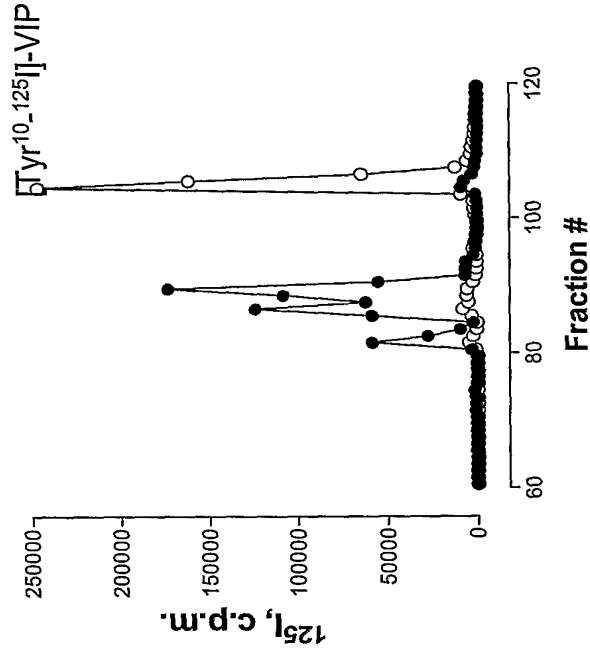
B



C



A



B

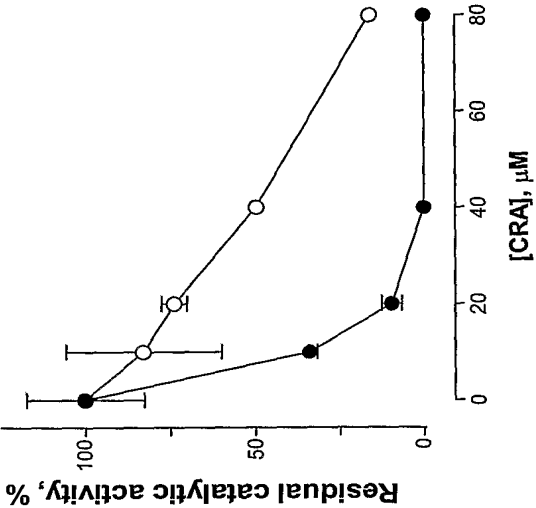


Fig 23

Fig 24

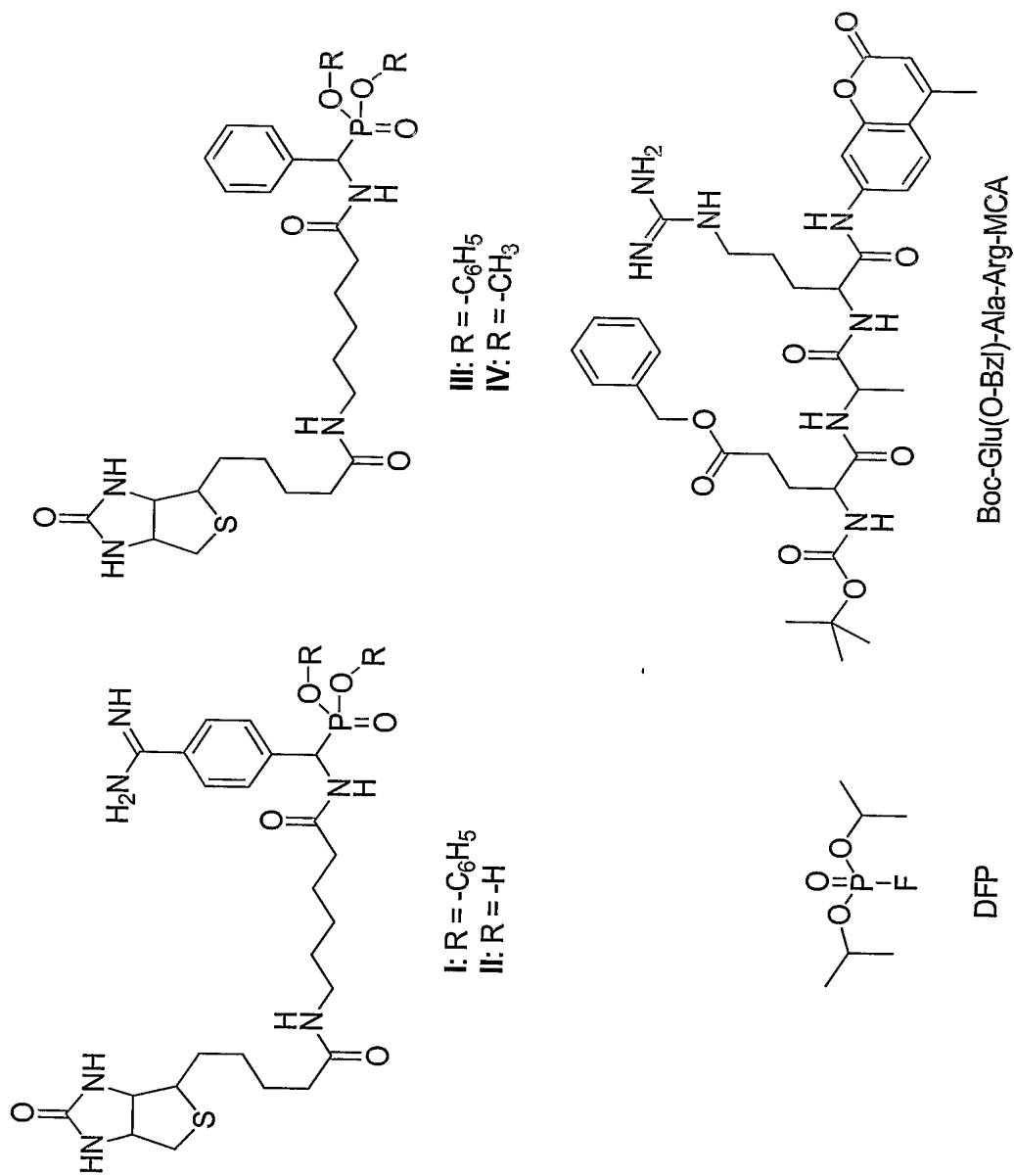


Fig 25

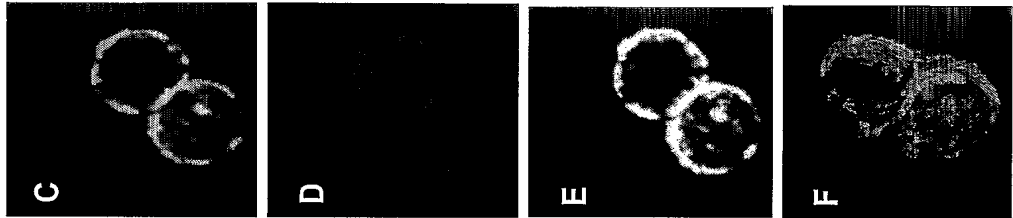
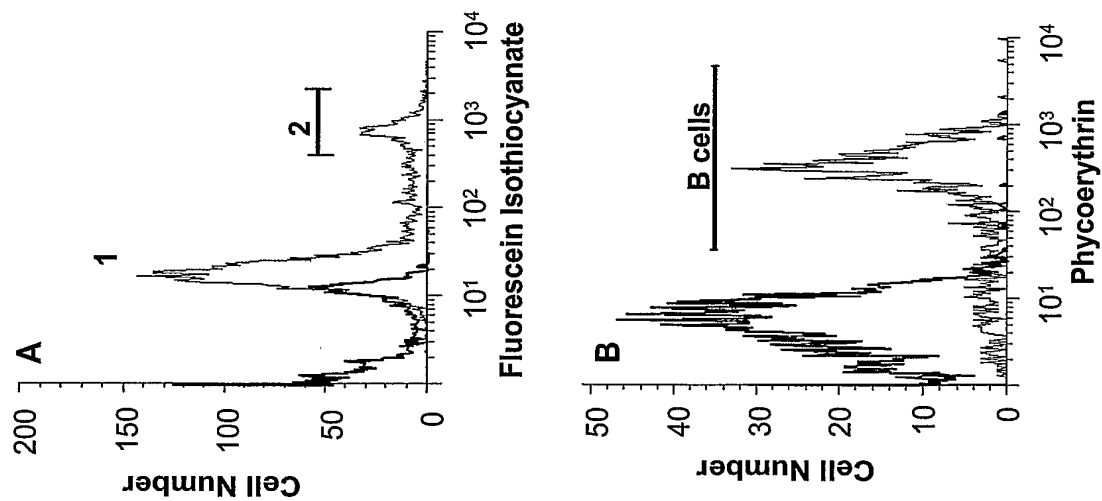


Fig 26

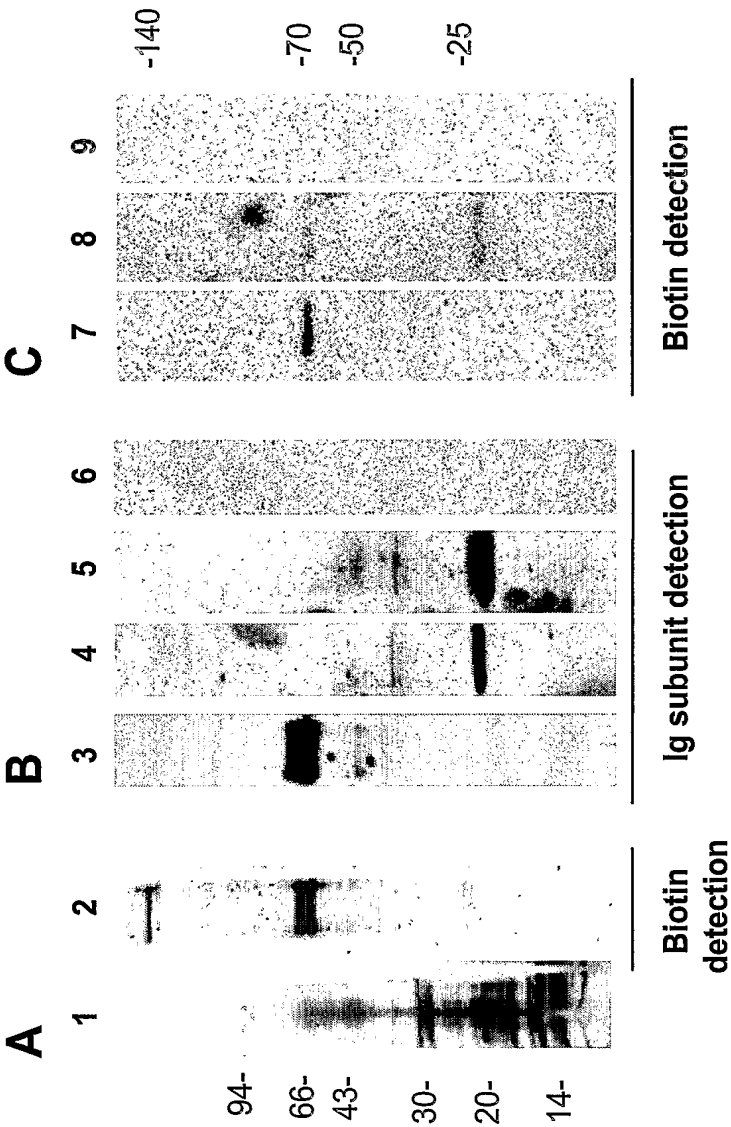


Fig 27

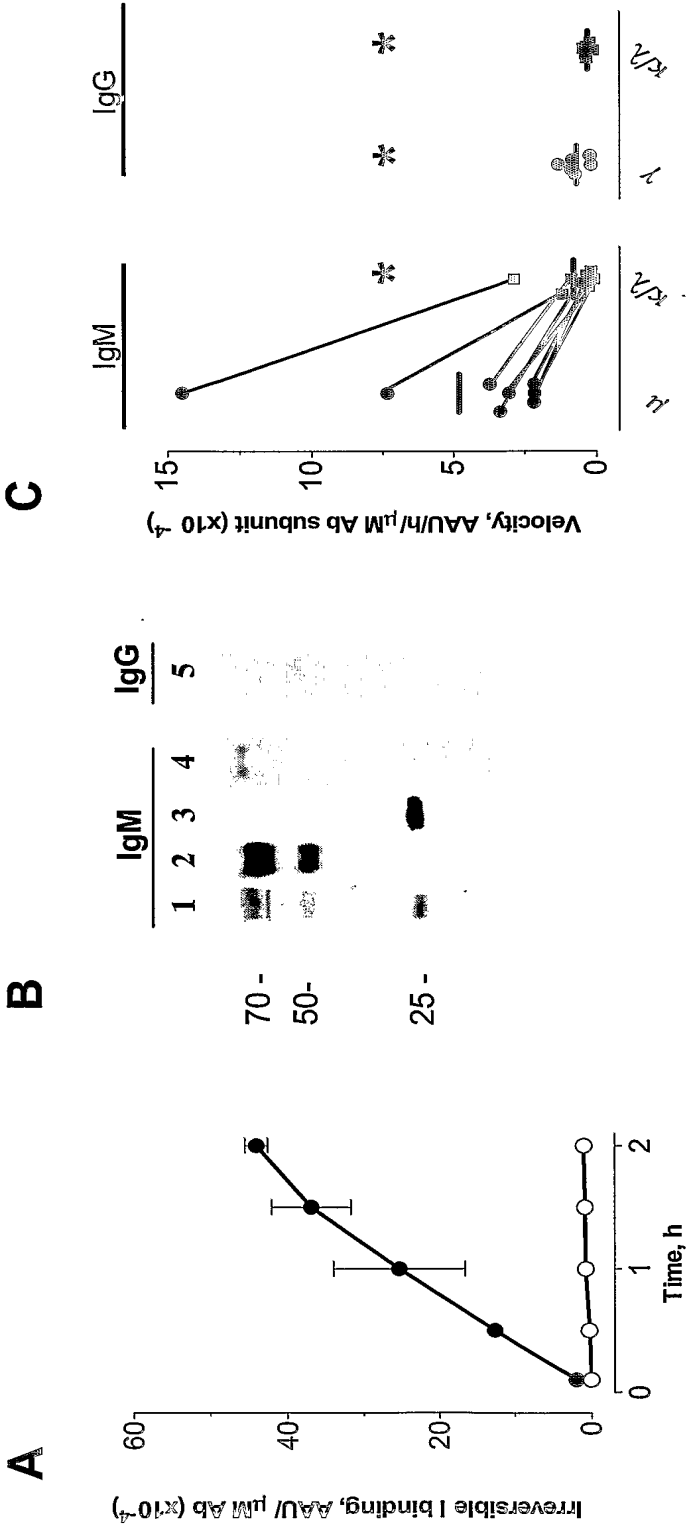


Fig 28

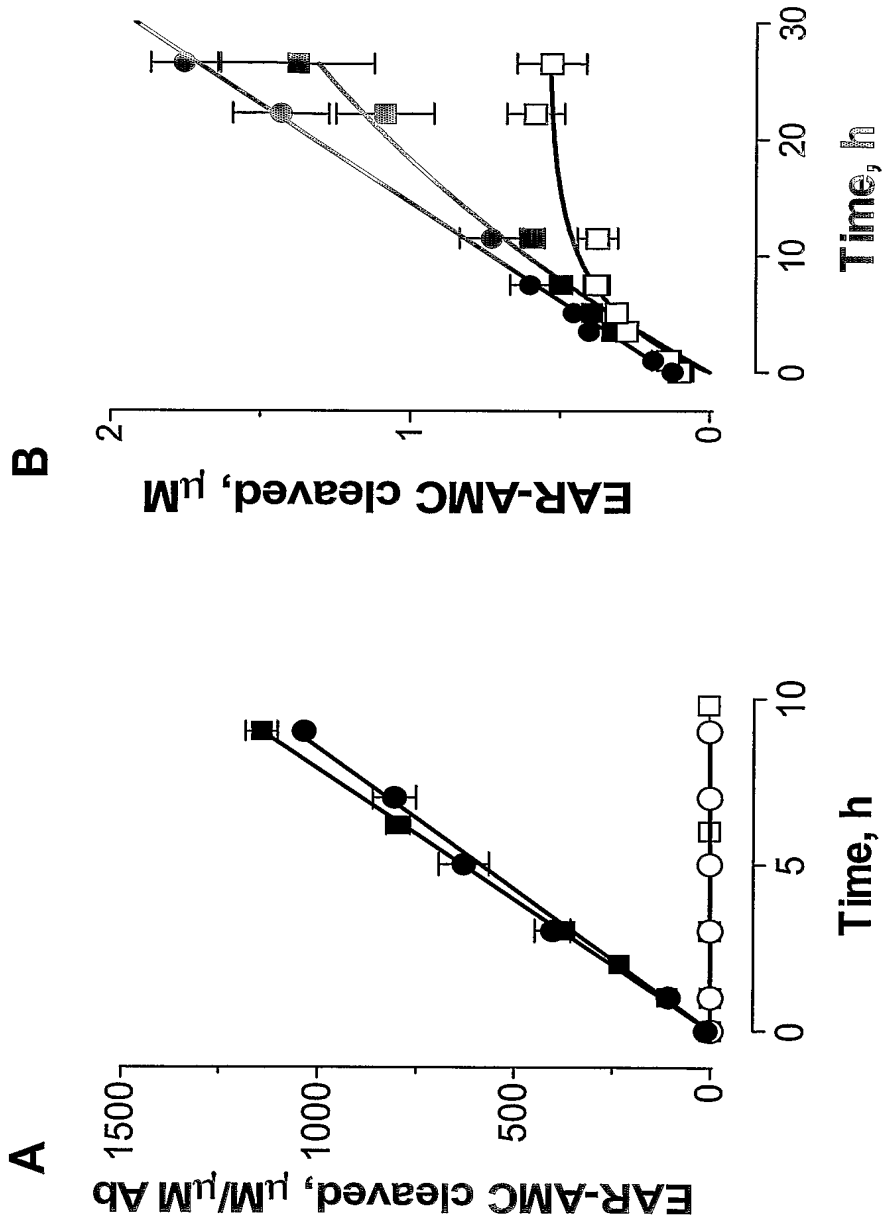
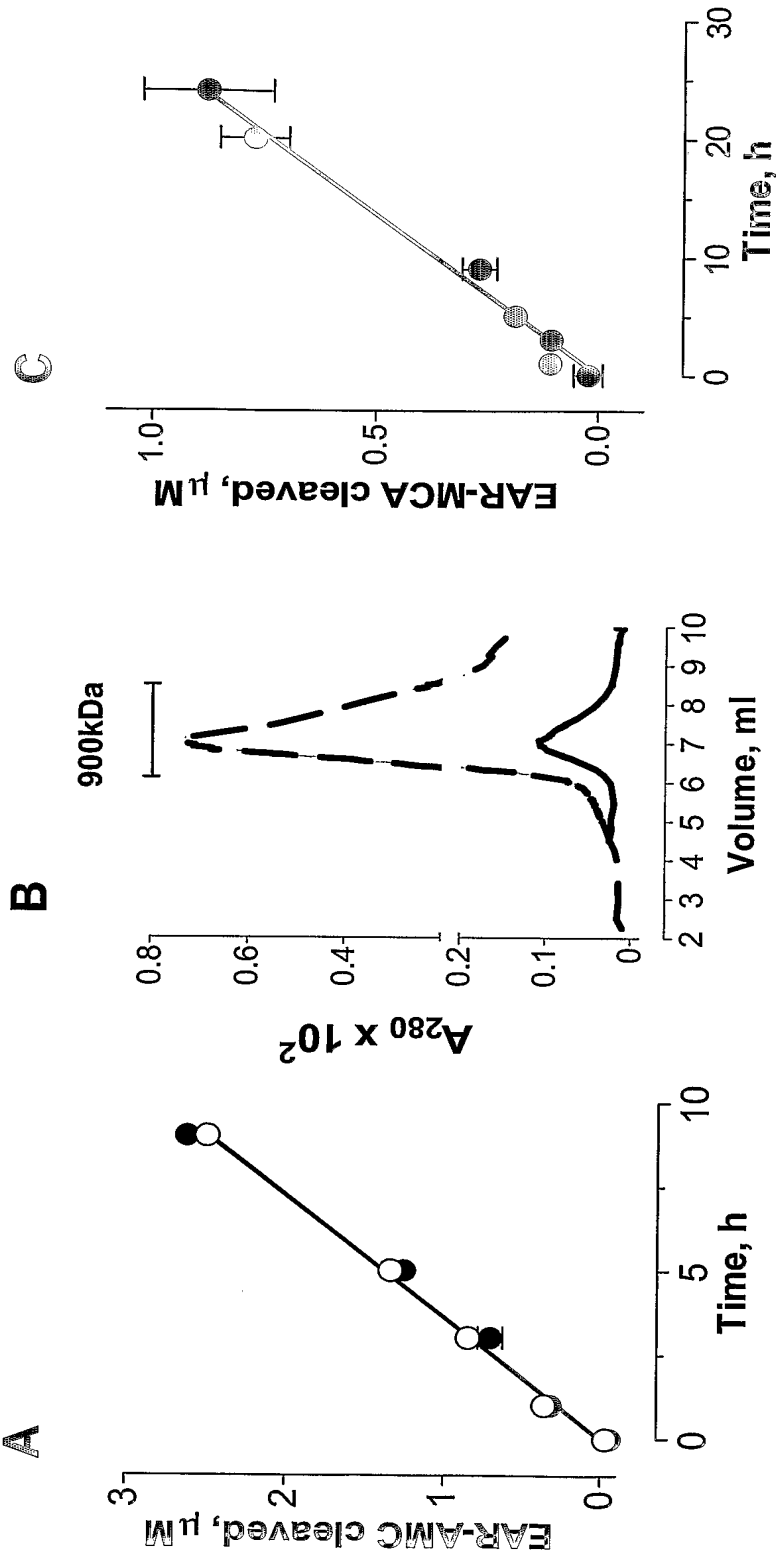


Fig 29





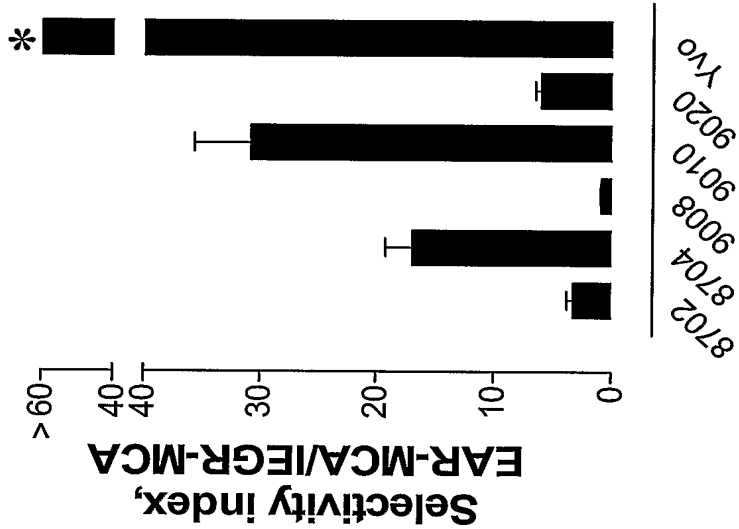


Fig 30

Fig 31

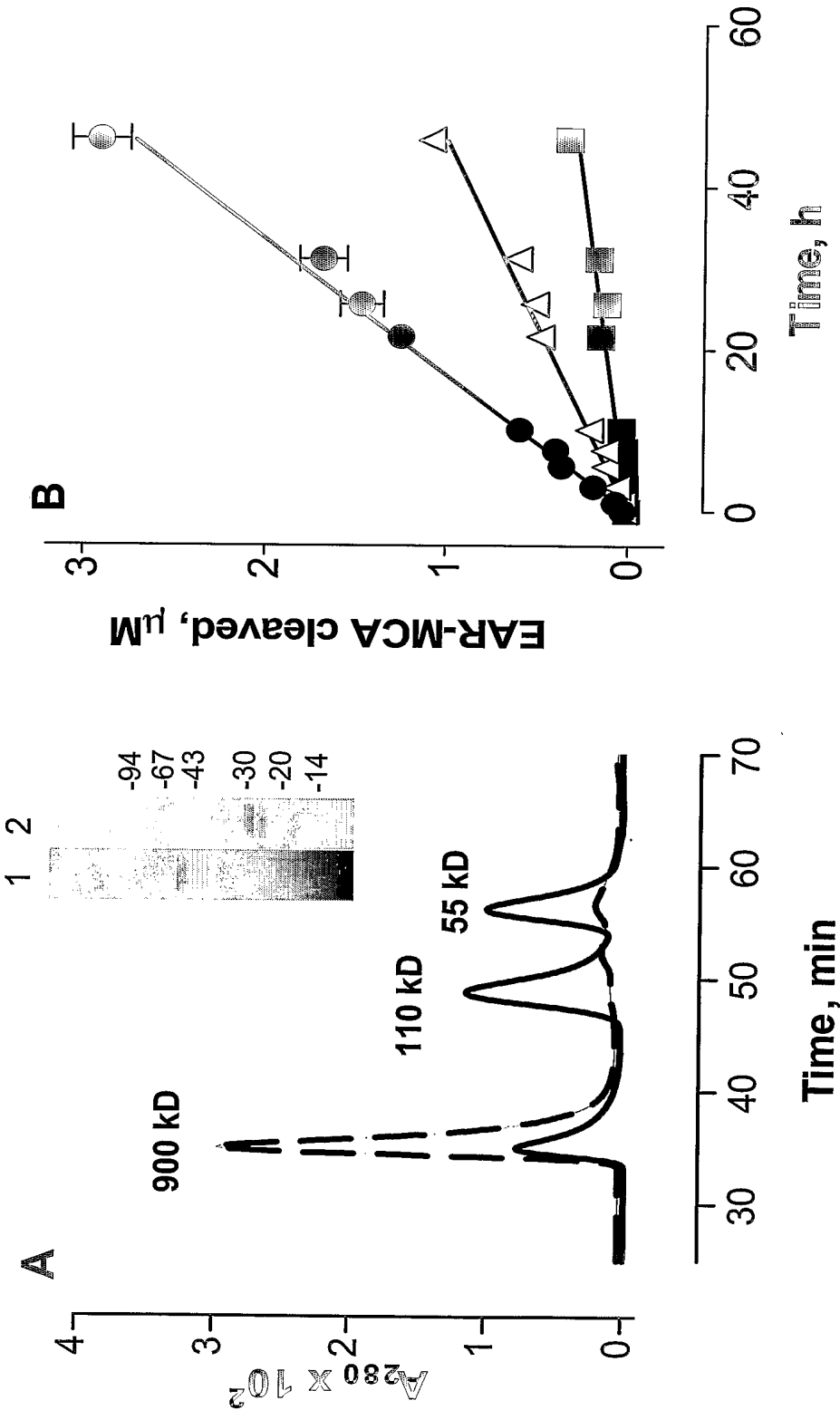


Fig 32

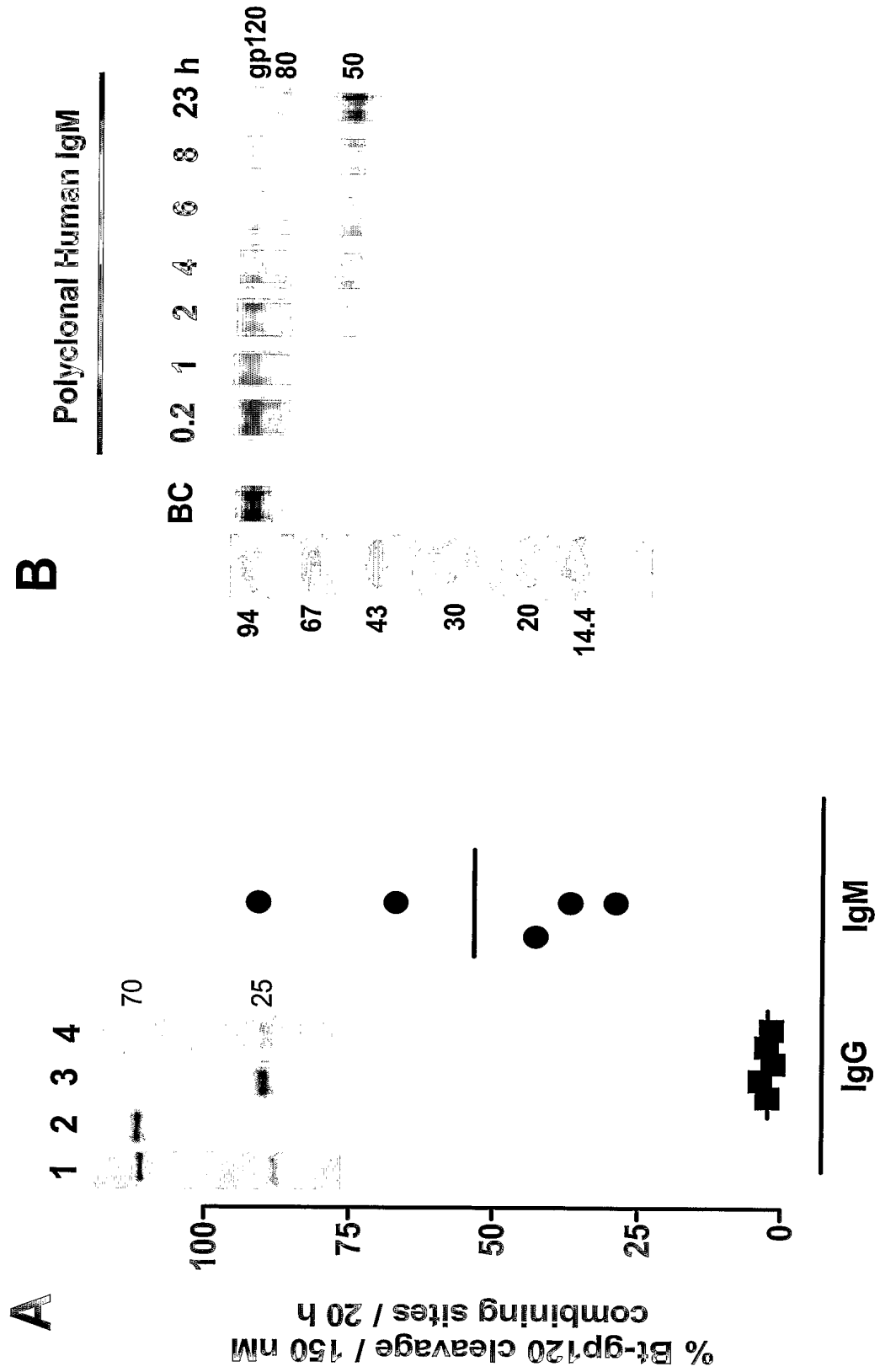


Fig 33

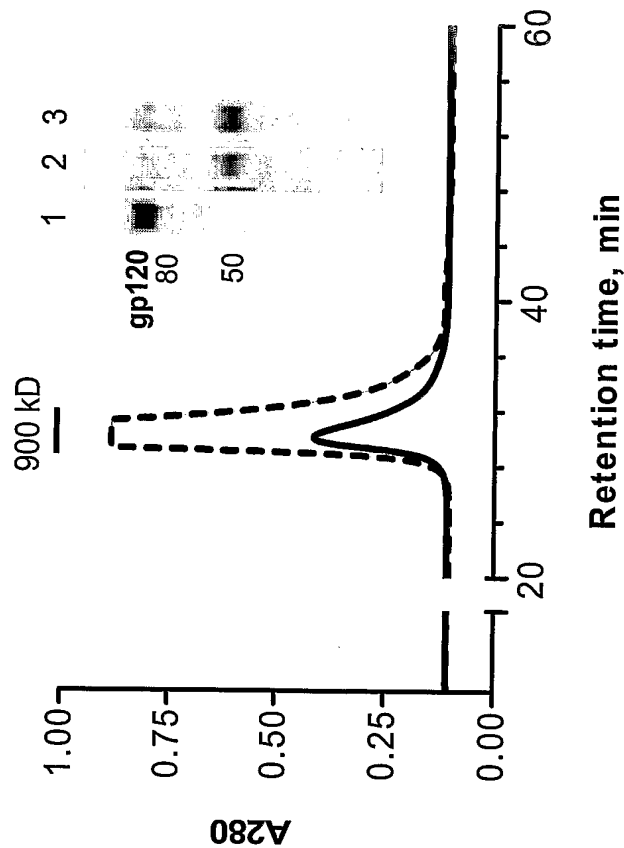


Fig 34

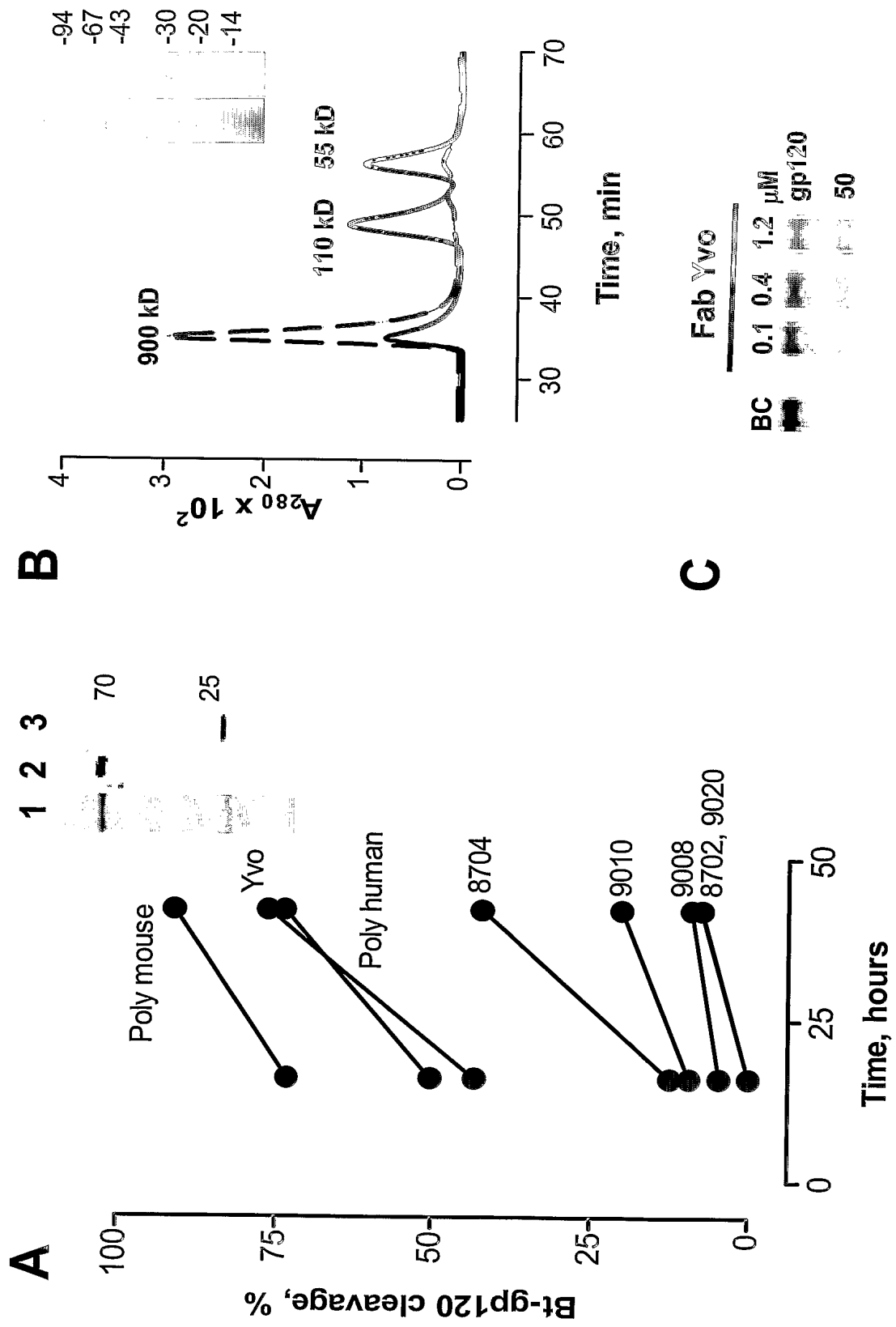


Fig 35

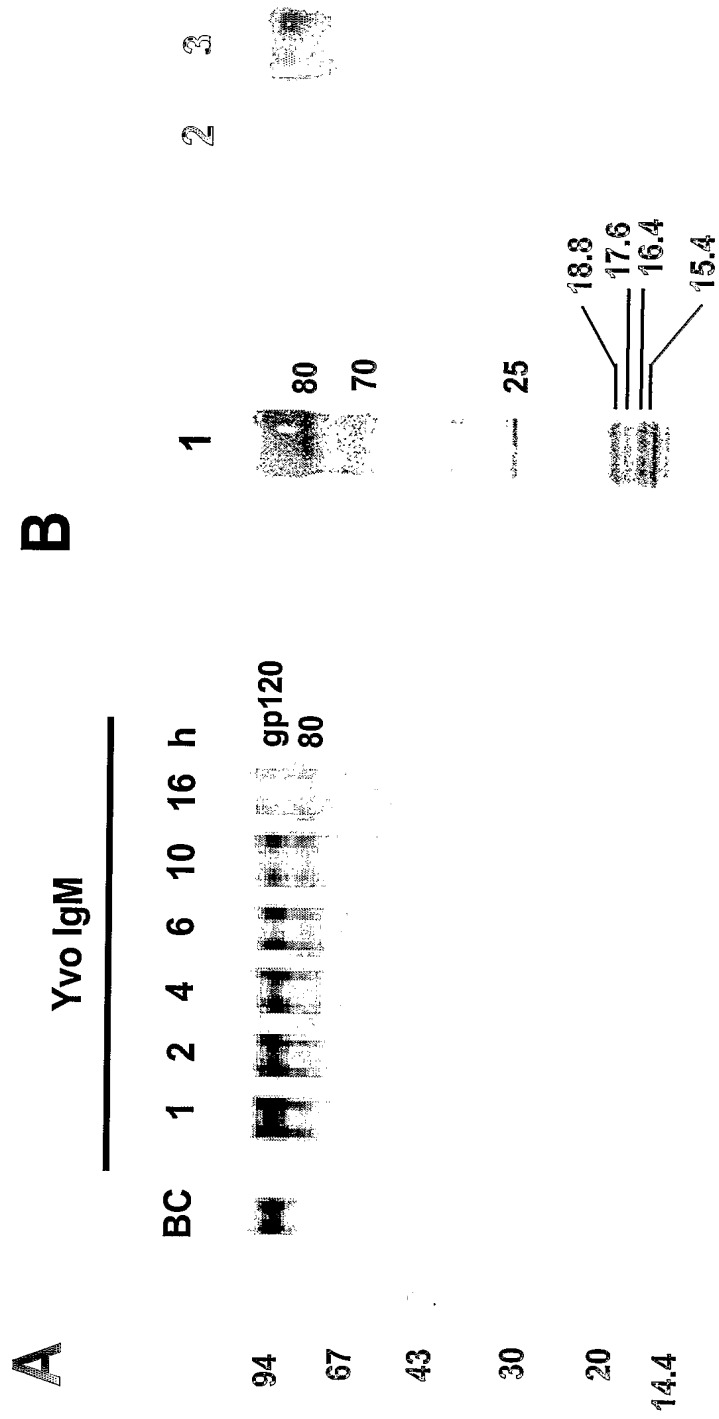


Fig 36

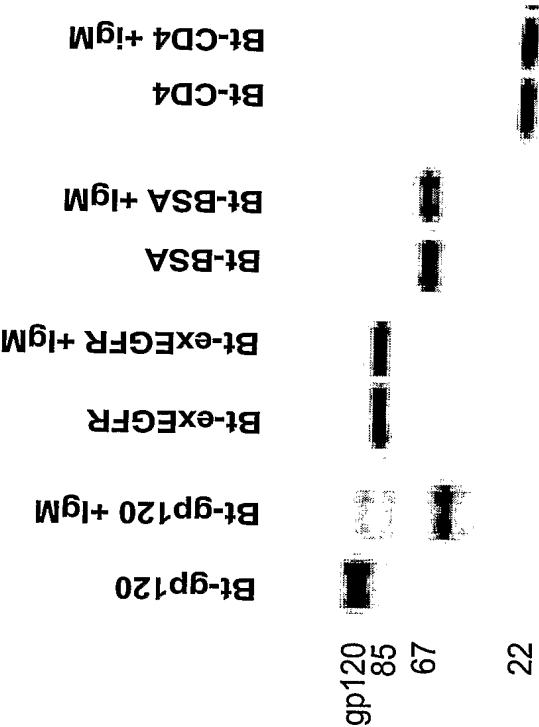


Fig 37

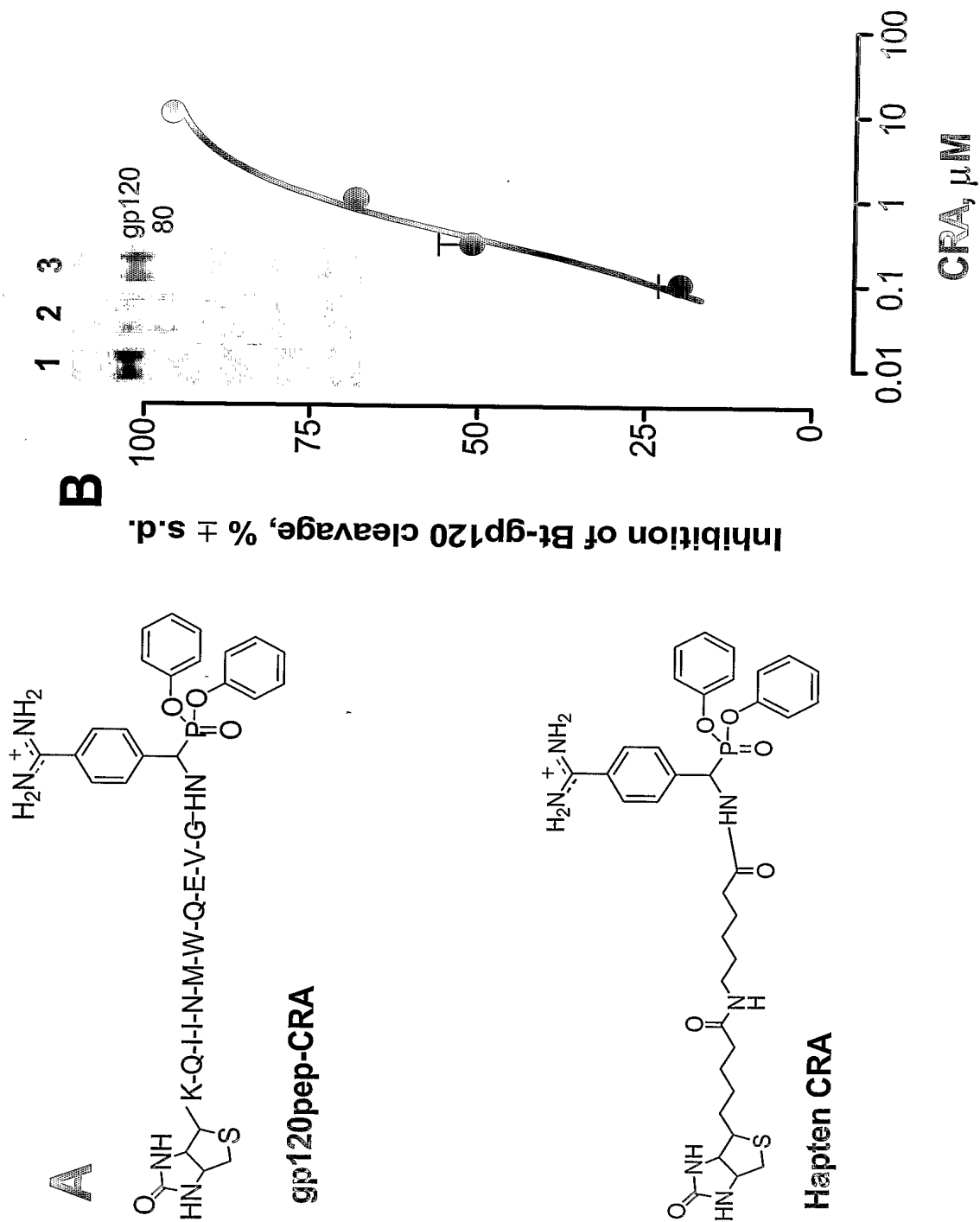




Fig 38

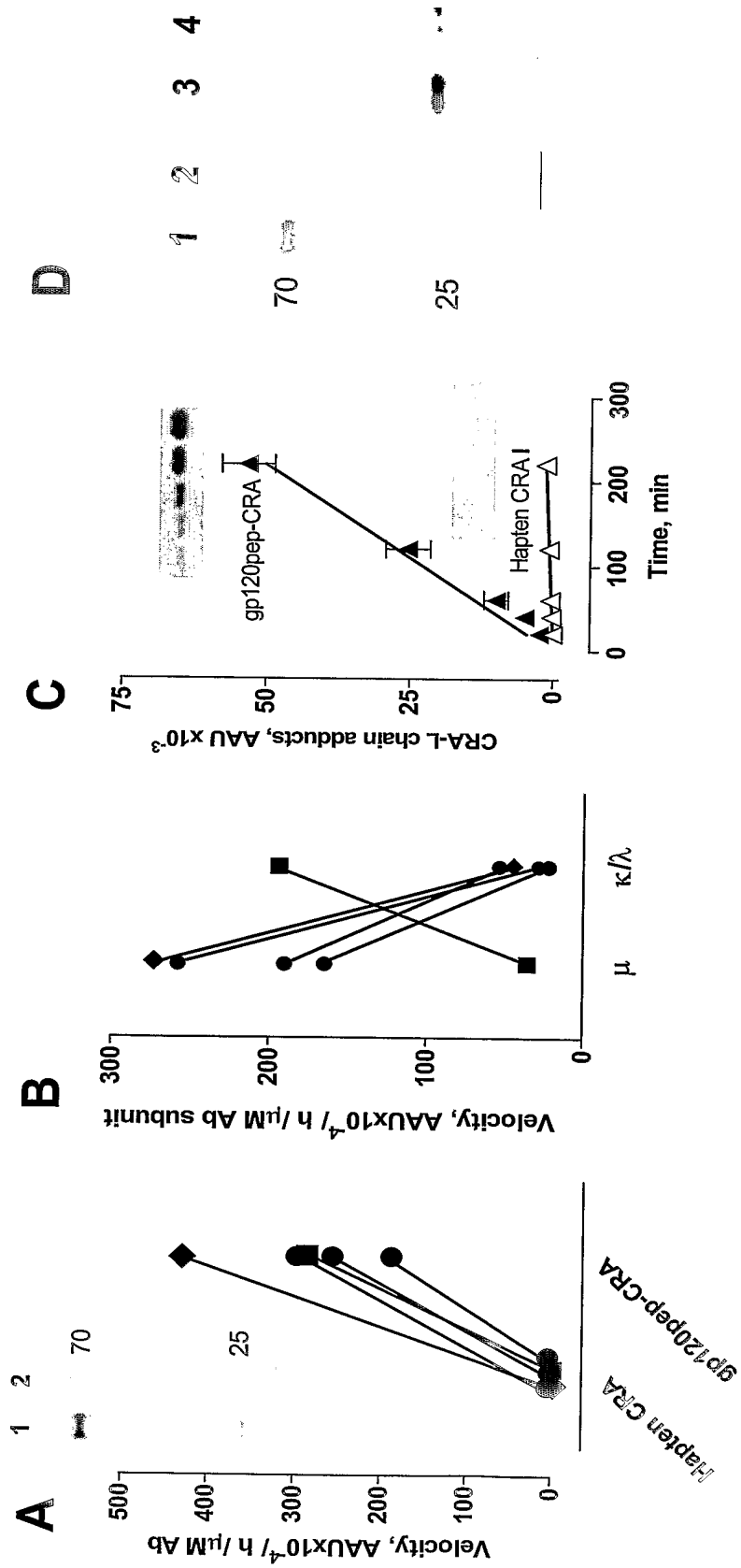
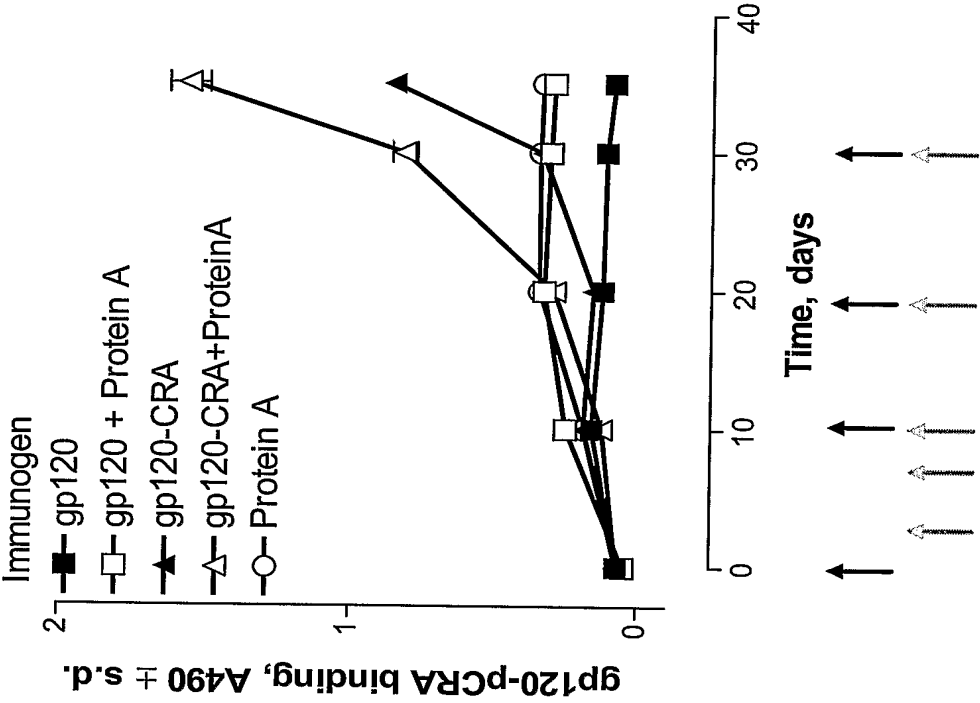


Fig 39



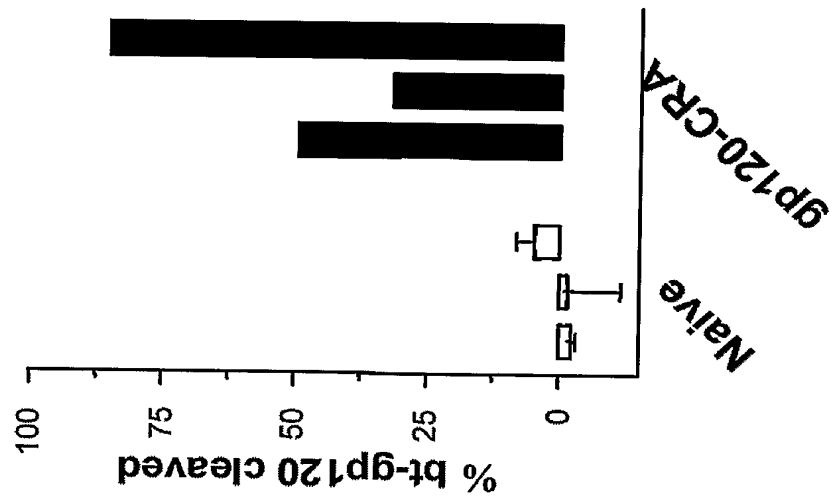


FIG 40

Fig 41

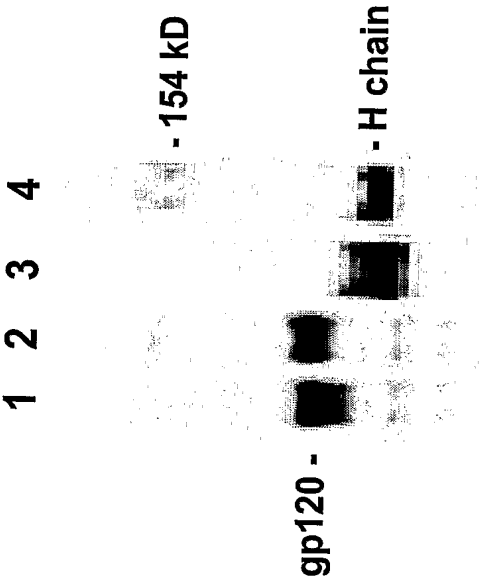


Fig 42

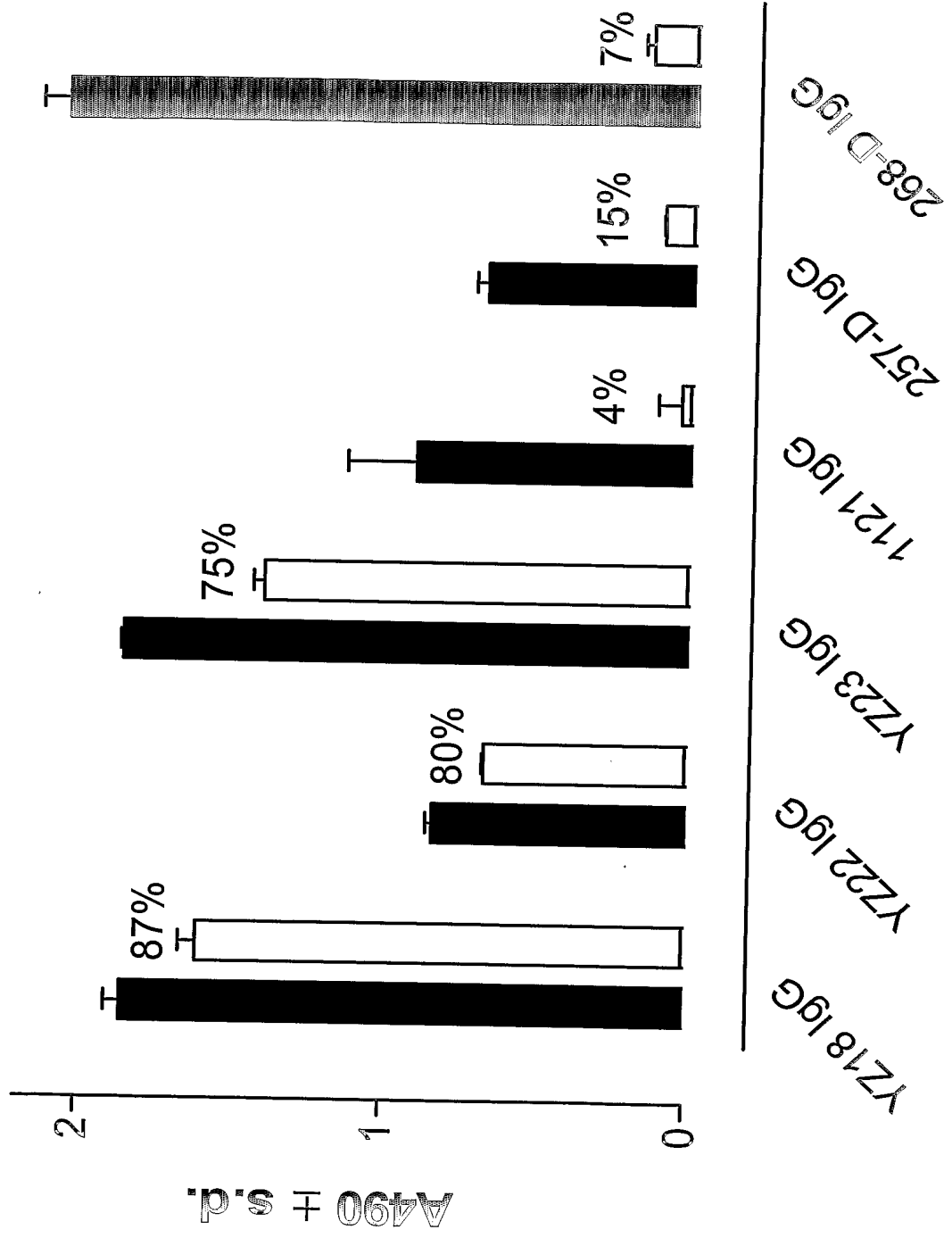


FIG 43

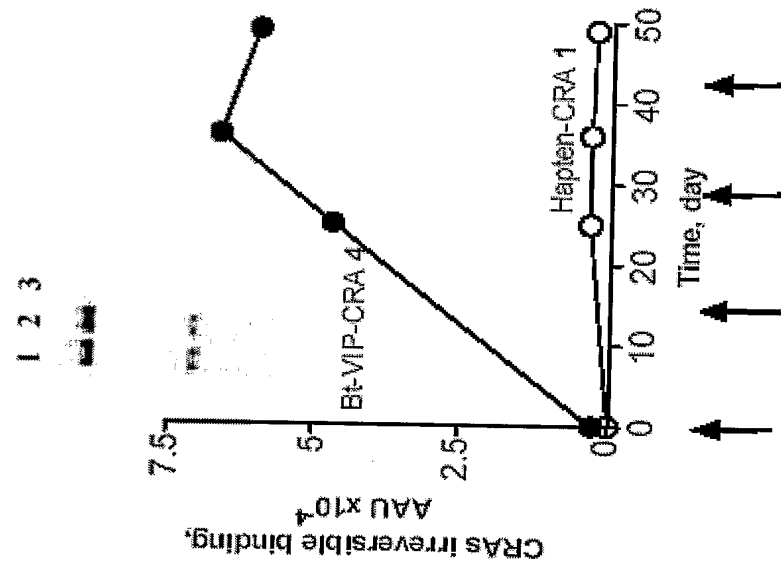


Fig 44

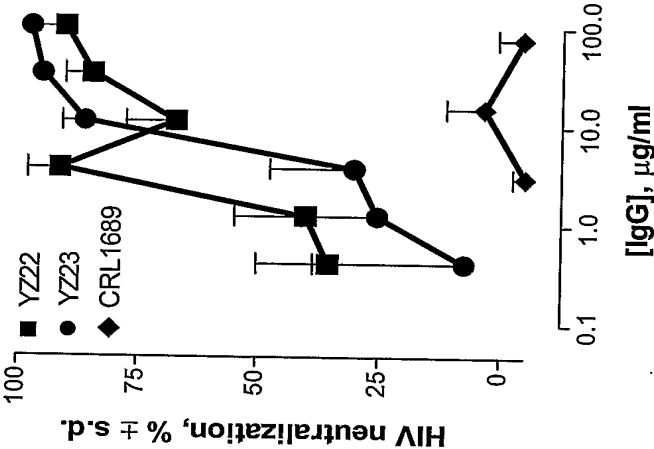


Fig 45

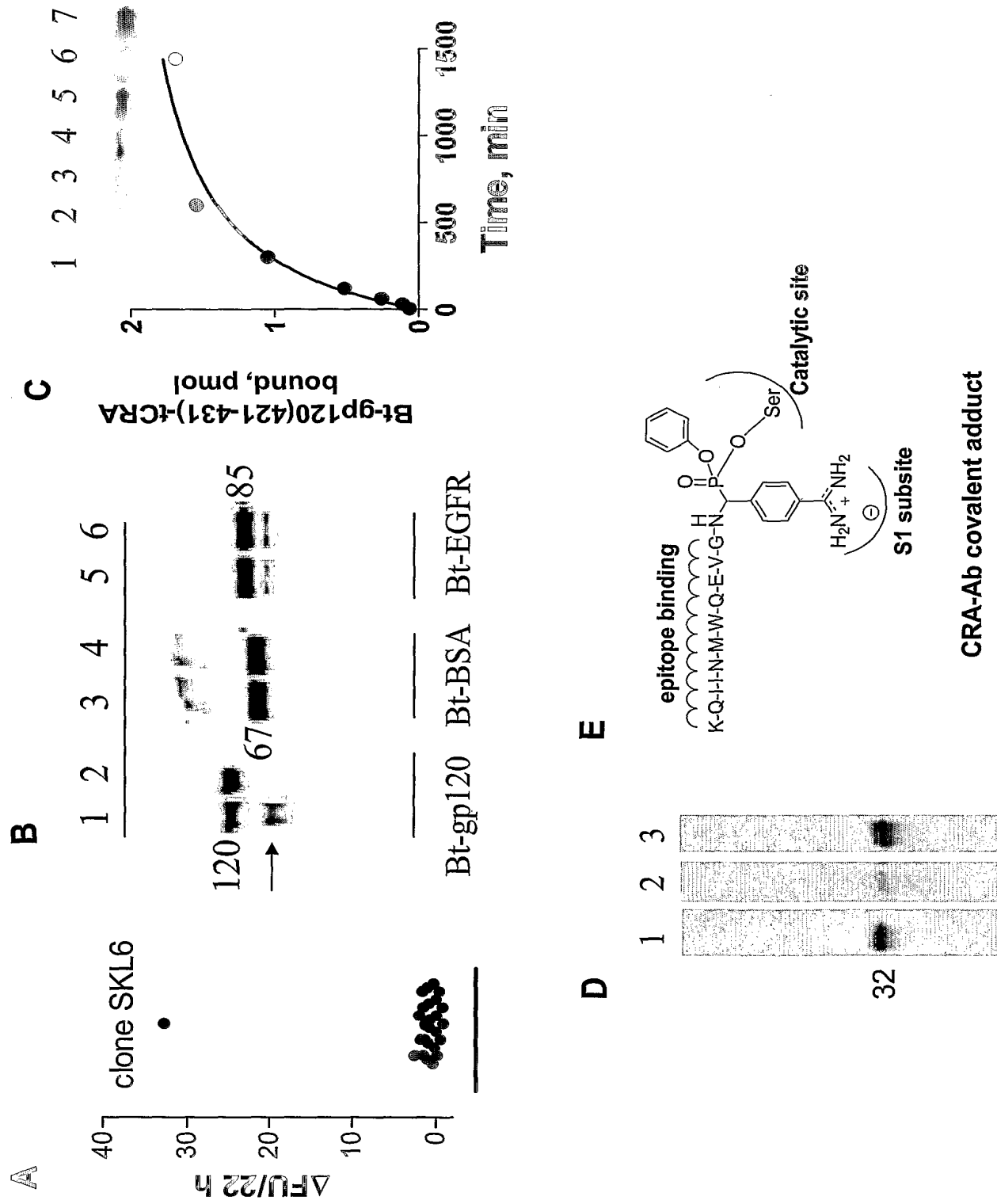




Fig 46

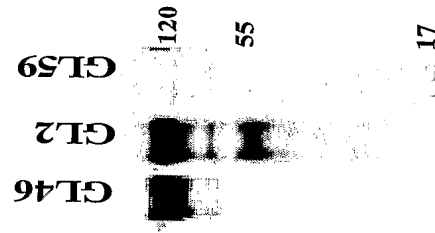


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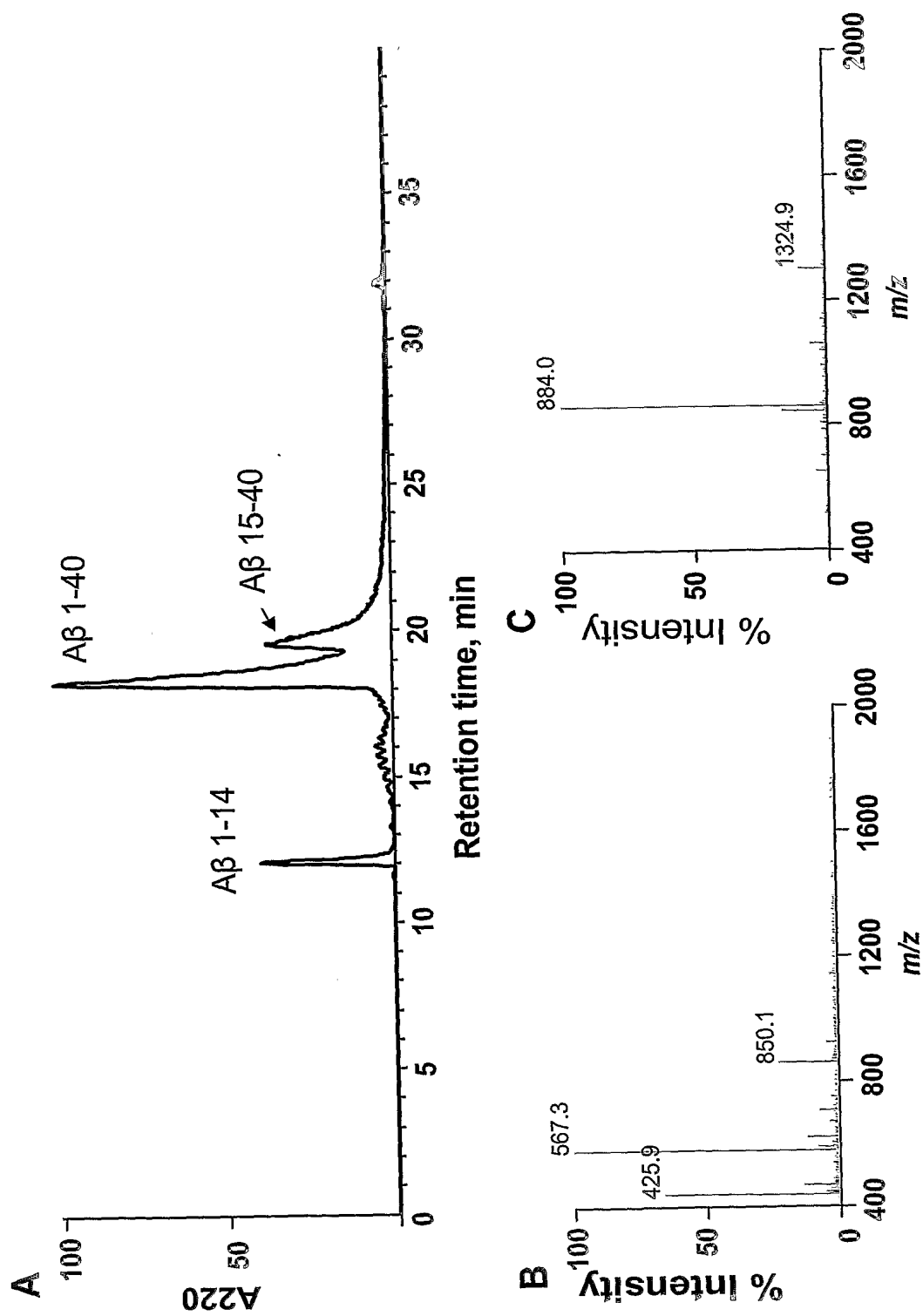


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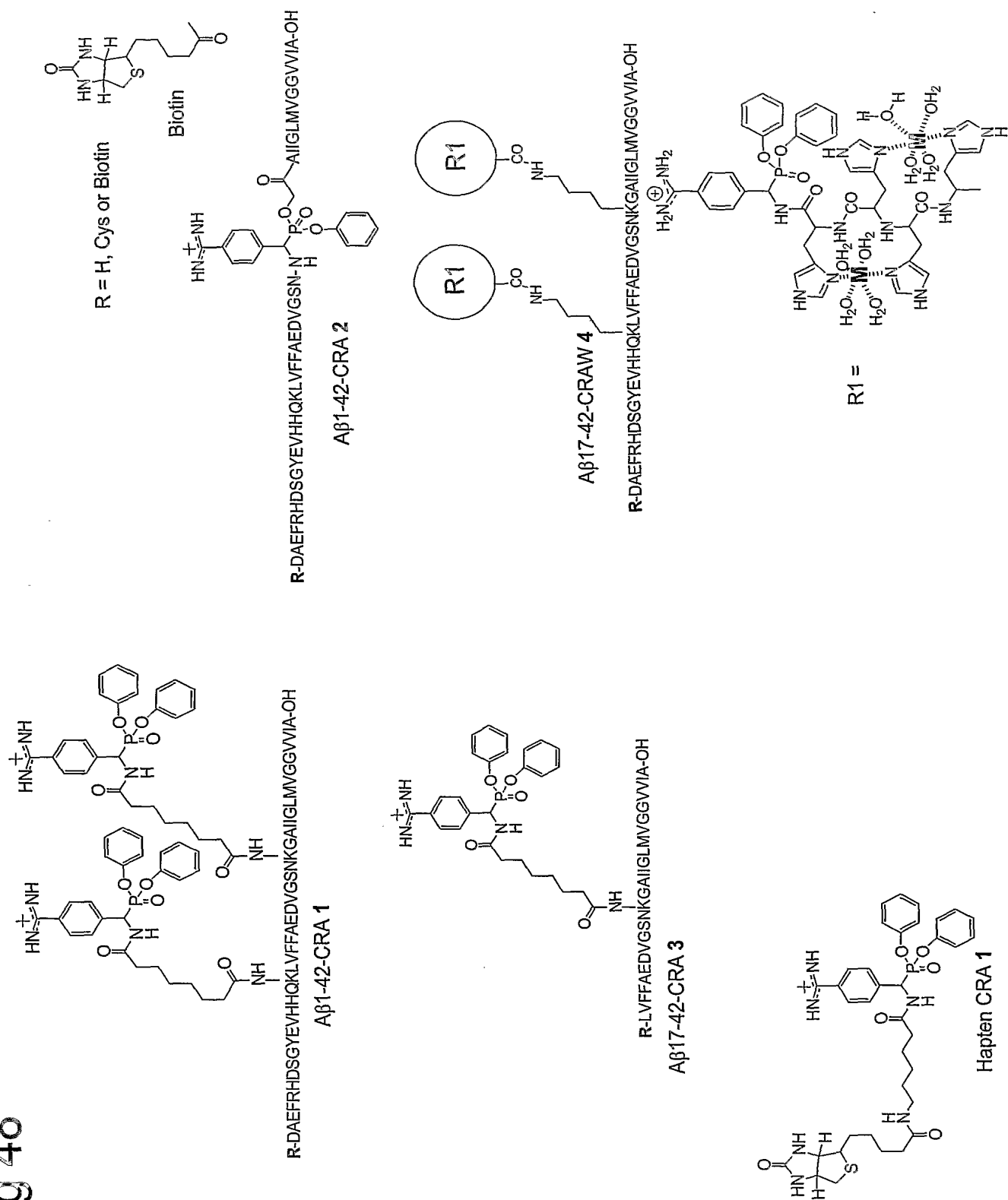


Fig 49

